

# **SITE SPECIFIC HEALTH AND SAFETY PLAN**

FOR

## **DEFERIET PAPER MILL SITE DEFERIET, NEW YORK 13628**



PREPARED FOR:

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
EMERGENCY RESPONSE BRANCH  
REGION II**

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EDISON, NJ 08837

CONTRACT NO. EP-S2-15-01

TASK ORDER NO.

GES PROJECT NUMBER: 14800-0059

PREPARED BY:

**GUARDIAN ENVIRONMENTAL SERVICES CO. INC.**



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OCTOBER 15, 2018



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**Appendix A: Safety Data Sheets (SDS)** – An inventory of all chemicals and products requiring a Safety Data Sheet will be conducted on the Deferiet Paper Mill Site. A Safety Data Sheet will be filed for each item and placed into a

folder. As additional products are brought on-site the corresponding SDS will be included in the folder. The location of the SDS folder will be made known to Site personnel during the initial orientation.

## Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
BBP	Blood borne Pathogen
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Chain of Custody
CPR	Cardiopulmonary Resuscitation
CRZ	Contamination Reduction Zone
DZ	Decontamination Zone
EPA	Environmental Protection Agency
EZ	Exclusion Zone
GES	Guardian Environmental Services Company, Inc.
GFCI	Ground Fault Circuit Interrupter
HASP	Health And Safety Plan
IDLH	Immediately Dangerous to Life or Health
N/A	Not Applicable
NEC	National Electrical Code
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NRR	Noise Reduction Rating
OSHA	Occupational Safety & Health Administration
PDR	Personal DataRAM
PEL	Permissible Exposure Limit
PPE	Personnel Protective Equipment
RAM	Real-time Aerosol Monitors
RCRA	Resource Conservation and Recovery Act
RM	Response Manager
SDS	Safety Data Sheet
SSO	Site Safety Officer
SZ	Support Zone
THAs	Task Hazard Analysis

## **1 INTRODUCTION AND SITE ENTRY REQUIREMENTS**

This document describes the health and safety guidelines developed for work to be performed by Guardian Environmental Services Company, Inc. (GES) as a USEPA Region II ERRS Prime contractor at the Deferiet Paper Mill Site, located at 400 Anderson Avenue, Deferiet, New York 13628-0001. The plan is designed to provide measures necessary to protect on-site personnel, visitors, and the public from physical harm and exposures related to the planned work activities. The procedures and guidelines contained herein were based upon the best available information at the time of the plan's preparation. Specific requirements will be revised when new information is received, or conditions change. A written amendment will document all changes made to the plan. Any amendments to this plan will be included as attachments. Where appropriate, specific OSHA, EPA standards, ANSI, NIOSH, ACGIH, EPA's Emergency Responder Health & Safety Plan, and/or other guidance will be cited and applied.

### **1.1 GENERAL SITE SAFETY RULES**

The following are standard safe work practices that apply to all site personnel and will be discussed during the initial site-specific orientation and reinforced thereafter during safety briefings prior to initiating work on the site:

- All work will be performed in accordance with requirements and procedures described in GES Corporate Health and Safety Manual.
- Eating, drinking, chewing gum or tobacco, and smoking are prohibited in all work zones.
- The buddy system will be practiced at all times on the Deferiet Paper Mill Site. During site operations, each worker will consider themselves as a safety backup to their partner.
- ALL incidents, injuries, and near misses will be IMMEDIATELY reported to the RM/SSO, regardless of perceived severity or importance.
- No personnel will be admitted to the Contamination Reduction Zone (CRZ) or Exclusion Zone (EZ) without the proper safety equipment, training and medical surveillance certification.
- All personnel must comply with established site and safety procedures. Any staff member who does not comply with any safety policy, as established by the OSC or RM/SSO, will be immediately dismissed from the site.
- Proper personal hygiene and decontamination procedures shall be strictly followed at all times.
- All personnel entering the exclusion zone shall sign in and out of EZ log sheet located in the contamination reduction zone (CRZ).
- All safety incidents/accidents/near-miss incidents will be immediately reported to the RM/SSO.

### **1.2 DAILY SAFETY MEETINGS**

Daily meetings will be held (at the start of each shift) to ensure that: all personnel understand site conditions and operating procedures; personal protective equipment is being used correctly; to address any worker health and safety concerns; anticipated weather concerns; and any new

information or potential changes. All new amendments to the Health and Safety Plan will also be reviewed at these meetings. Topics will include: discussions of work activities, potential hazards that may be encountered, and the controls to be implemented to address them. The “tail-gate” meetings will address any changes in work practices or processes, new equipment, or anticipated safety concerns such as inclement weather.

### **1.3 SITE SAFETY PLAN ACCEPTANCE ACKNOWLEDGMENT**

The Response Manager shall be responsible for informing all individuals entering the exclusion zone (EZ) or contamination reduction zone (CRZ) of the contents of this HASP and ensuring that each person signs the Safety Plan Acknowledgment Form. By signing the Safety Plan Acknowledgment Form, individuals are recognizing the potential hazards present on-site, and the policies and procedures that are required to minimize exposure or adverse effects of these hazards. Personnel are also thereby acknowledging, agreeing and consenting to all policies, procedures, regulations, rules and site-specific requirements of the HASP.

### **1.4 TRAINING REQUIREMENTS**

All personnel entering the EZ or CRZ on the Deferiet Paper Mill Site must have completed training requirements for hazardous site work in accordance with OSHA 29 CFR 1910.120 and Hazard Communication training per 29 CFR 1910.1200. In addition to the 40 hours of classroom training in accordance with 29 CFR 1910.120, all field personnel will receive 8 hours of refresher training on an annual basis. The Response Manager shall also have 8 hours of training on safe management of hazardous waste sites. All site employees will have completed required job/task specific training in accordance with OSHA, and GES training requirements. Training requirements may include, but not be limited to: respiratory protection, excavation safety, heavy equipment safety, calibration, use and maintenance of monitoring equipment, PPE, First aid/CPR/AED, and site-specific safety training. Additional training may be necessary once a more thorough site assessment has been completed. The RM will assure that all personnel are properly trained as required prior to job assignment. Copies will be provided for site files if required.

Emergency response to potential dangers will be discussed with all personnel prior to beginning planned work activities on the Deferiet Paper Mill Site. The RM/SSO shall assign individual team members roles and responsibilities to carry out in the event of an emergency. All team members shall participate in the initial Site-specific emergency response planning and discussion to ensure full understanding of procedures, emergency assembly areas (primary and contingency), personal roles and responsibilities, Site communications, location of emergency equipment / First aid / eye wash stations.

Subcontractors may be used for various segments of the work. Training and certification requirements will be relative to their specific task, and subject to GES determination. Documentation of training requirements is the responsibility of each employer. Each individual may be required to provide evidence of all required training before site entry.

Training Requirements	Type of Training <sup>1</sup>	Personnel to be Trained
Site Specific Health and Safety Plan	R	ALL
Pre-Job Start H&S/SSHASP Briefing	R or C	All
H&S Tailgate Meetings	F	All
General Employee Training (new hire, annual, routine) – GES provided	C	All on site for >10 consecutive days
40 hr. Hazardous Waste Operations and Emergency Response (HAZWOPER) Class and 24 hr. Supervised Fieldwork	C	General site workers per 1926.65(e) (3) (i).
8-hour HAZWOPER annual refresher	C	All – Within 1 year from the previous 40-hour HAZWOPER 8-hour refresher training
8-Hour HAZWOPER Supervisor	C	Response Manager
Fire Extinguisher	C	All
First Aid/Cardiopulmonary Resuscitation (CPR)	C	At least two team members
Personal Protective Equipment (PPE) (Employer's Program and SSHASP)	F	All
Employer Hazard Communication Program	R	All
Site Specific Emergency Response Training	F	All
Site Specific Safety Training	F,R	All
Heavy Equipment Safety	R,F	All
<sup>1</sup> Types of Training: <b>R</b> = Read Training; <b>C</b> = Classroom Training; <b>F</b> = Field Training		

## **1.5 MEDICAL MONITORING REQUIREMENTS**

All personnel entering the EZ or CRZ must have completed the required medical monitoring requirements under OSHA 29 CFR 1910.120 (f) and 29 CFR 1926.62(j). Subcontractors may be used for various segments of the work. Medical requirements will be relative to their specific task, and subject to GES determination. All personnel and subcontractors will have successfully completed a physical examination which meets the requirements of OSHA 29 CFR 1926.62 prior to entering work zones. All field personnel must undergo a physical examination annually, which is to be performed by a physician Board-certified in Occupational Medicine. The physician will be made familiar with the job-related duties of each employee examined as well as each employee's anticipated exposure and description of any PPE to be used. In addition, the physician will be provided a copy of OSHA 29 CFR 1926.62, any information from previous examinations, and a copy of Section 5.0 of NIOSH 85-115 if any of these documents are not already in his possession. Additional medical monitoring and exposure assessment requirements may be necessary on the Deferiet Paper Mill Site once additional site assessments have been completed. If necessary, the appropriate arrangements will be made to ensure site personnel receive the necessary medical monitoring and an amendment will be made to this Health and Safety Plan.

## **1.6 FIT TESTING REQUIREMENTS**

All personnel entering the EZ or CRZ using a full-face air purifying respirator (APR) must have successfully passed a qualitative or quantitative respirator fit test for a tight fitting respirator. Fit testing shall be performed in accordance with OSHA 29 CFR 1910.134 within the last twelve (12) months. Documentation of fit testing is the responsibility of each employer, the Response Manager shall ensure that all personnel entering the EZ/CRZ have successfully passed a qualitative or quantitative respirator fit test and have supplied a copy of the fit test. Records of all up to date fit

tests for Site personnel shall be maintained on-site. All personnel shall be determined fit to wear a respirator by a licensed health care professional prior to respirator use and fit testing.

### **1.7 SITE ORIENTATION TRAINING**

All personnel working on site shall attend a site orientation that includes a review of the HASP including site-specific safety rules and requirements. Personnel accessing the site strictly for deliveries or administrative purposes shall not be required to attend the training. Prior to starting work, each employee will attend a health and safety orientation and will receive information and training which shall include, at a minimum, the following:

- Name of Site Managers and other key personnel.
- The location and availability of the written HASP.
- The location and availability of the Safety Data Sheets (SDS) folder.
- Hazardous contaminants that may be encountered on site and associated health effects.
- Decontamination procedures.
- The location of the designated smoking area.
- Site layout and location of physical hazards that may be encountered.
- Necessary PPE, training on proper use, storage and task specific levels of protection required for scheduled activities.
- Locations of Emergency phone numbers and map to nearest emergency care facility/hospital/urgent care (Carthage Area Hospital).
- Action levels and situations requiring upgrade or downgrade of level of protection.
- The importance of the Job Safety Analysis program and participation in the process.
- The site Emergency Action Plan and procedures to follow in the event of an incident and the location of the primary and contingency emergency assembly areas, and the site specific emergency alerting procedures.
- Familiarization of work site and location of controlled work zones: Exclusion Zone, Contamination Reduction Zone / Decontamination area, Support Zone and proper decontamination procedures.
- The importance of following the buddy system at all times, personnel will not work alone in isolated areas of the Site.
- ALL incidents, injuries, and near misses will be IMMEDIATELY reported to the RM/SSO, regardless of perceived severity or importance.
- Location of first aid kits, fire extinguishers, eye wash stations, SSHSP, and SDS folder.
- Air monitoring protocol and location results will be posted.
- Site specific training (including site specific hazards) related to all potential hazards unique to the Deferiet Paper Mill Site.

### **1.8 DELIVERY PERSONNEL AND SUPPORT SUBCONTRACTORS**

Personnel whose sole purpose is to deliver goods to the support zone shall not be required to meet the training and medical fitness requirements described in this section. Personnel entering the CRZ or EZ specifically for the purpose of delivery or maintenance of equipment are subject to sections 1.5, 1.6 and 1.7 at the discretion of the RM/SSO. Personnel performing site work strictly within the support zone and clean areas of the site are not required to meet the training and medical

qualifications but shall attend the site orientation training described in Section 1.7. The site orientation training shall cover the HASP including site hazard communication information.

## **2 RESPONSIBLE SITE AUTHORITY**

### **2.1 Project Team:**

<b>Title</b>	<b>Name</b>	<b>Office</b>	<b>Cell Phone Number</b>
USEPA Region II On Scene Coordinator	Joel Petty	USEPA Region II	732-321-4388 848-248-5257
Response Manager	Kevin Shaver	GES Newark, DE	302-518-1910
Health & Safety Manager	David Frost	GES Newark, DE	302-683-4620

### **2.2 PERSONNEL DESCRIPTIONS**

#### **2.2.1 EPA On-Scene Coordinator**

The OSC for the Deferiet Paper Mill Site is Joel Petty. The OSC, as the representative of the U.S. EPA, is responsible for directing project mitigation activities and for oversight of health and safety protocols for all individuals on site at all times. All U.S. EPA, Guardian Environmental Services Inc., and subcontractors' health and safety guidelines and requirements, as well as all applicable OSHA standards shall be applied. However, each contractor (as an employer under OSHA) is also responsible for the health and safety of its employees. If there is any dispute with regard to health and safety, the following procedures shall be followed:

1. Attempt to resolve the issue on site; and
2. If the issue cannot be resolved, site personnel shall consult off-site health and safety personnel for assistance and the specific task or operation in dispute shall be discontinued until the issue is resolved.

#### **2.2.2 Response Manager / Site Safety Officer**

The Response Manager/Site Safety Officer (RM/SSO) for the Deferiet Paper Mill Site will be Jay Robertson. The RM/SSO is responsible for the progress of the work at the project level and overall site Health and Safety. He supervises all project personnel to ensure that all on-site work is performed in compliance with Site Plans as well as work orders provided by the OSC. The RM/SSO is responsible for daily implementation of the site specific HASP including, but not limited to, changes in PPE, training requirements, policy enforcement, and health/safety monitoring. The RM/SSO is also responsible for decontamination procedures and updating the HASP as job site conditions change. The following are the primary responsibilities of this position:

- Prepares and organizes the background review of the work plan and the field team.
- Obtains permission(s) for site access and coordinates activities with appropriate officials.
- Ensures that work plan is completed and remains on schedule.
- Ensures compliance with the HASP.

- Briefs the field teams on their specific assignments.
- Ensures that safety and health requirements are met. Prepares the final reports and support files on the remedial activities.
- Documents field activities.
- Ensures protective clothing used is consistent with the requirements of the HASP.
- Periodically inspects protective clothing and equipment.
- Ensures that PPE is properly stored and maintained.
- Ensures the proper selection and use of fall protection equipment.
- Controls entry and exit at the Access Control Points.
- Coordinates safety and health program activities with on-site essential personnel.
- Confirms each team member's suitability for work based on a physician's recommendations.
- Generates a task hazard analysis for each project task and ensures that all personnel participate and fully understand the hazards and associated controls.
- Monitors the work parties for signs of work related stressors, such as cold/heat stress, and physical fatigue.
- Monitors and documents on-site hazards and conditions.
- Participates in the preparation of and implementation of the HASP.
- Conducts periodic inspections to determine if the HASP is being followed.
- Enforces the "buddy" work system.
- Ensures decontamination area is set up properly.
- Ensures that all required equipment is available.
- Ensures personnel have adequate training relating to conduct work tasks.
- Advises medical personnel of potential exposures and consequences or effects.
- Is aware of emergency procedures, evacuation routes, and the telephone numbers of emergency services, ambulance service, local hospital, poison control center, fire department, and police department.

### **2.2.3 Field Team Members**

All team members are responsible for asking questions to ensure a complete understanding of the site-specific HASP. By signing the Safety Plan Acknowledgment Form, individuals are recognizing the potential hazards present on the Deferiet Paper Mill Site, and expressing understanding in both the hazards and the processes necessary to minimize exposures. Further, individuals are expressing understanding of all site-specific policies, procedures, rules and regulations as set forth in this HASP and agreeing to comply with such.

Field Team Members shall:

- Report any unsafe or potentially hazardous conditions to the RM/SSO.
- Comply with rules, regulations, and procedures as set forth in this HASP.
- Express safety ideas or concerns in the daily safety meetings.
- Perform all tasks safely.
- Perform JSA under the direction of the RM/SSO.
- Utilize "Stop Work Authority" if required.

#### **2.2.4 Subcontractors**

Each subcontractor is responsible for constant communication with the GES Response Manager in order to assign specific work tasks to their employees. Each subcontractor will provide qualified employees and allocate sufficient time, materials and equipment to safely complete their assigned tasks. In particular, each subcontractor is responsible for providing and equipping their personnel with any required personal protective equipment (PPE).

GES considers each subcontractor to be fully knowledgeable in all aspects of the work operations they are contracted to provide and each subcontractor is responsible for compliance with all regulatory requirements that pertain to those services. Each subcontractor is expected to perform their operations in accordance with their own unique safety policies and procedures in order to ensure that hazards associated with the performance of the work activities are properly controlled. Copies of any required safety documentation governing safety and health requirements for a subcontractor's work activities will be provided to GES for review and approval prior to the start of onsite activities if requested or required.

Hazards not listed in this HASP (but known to any subcontractor) or known to be associated with a subcontractor's services must be identified and addressed to the RM/SSO prior to beginning work. The RM/SSO has the authority to halt any subcontractor operations and to remove any subcontractor or subcontractor employee from the site for failure to comply with established health and safety procedures or for operating in an unsafe manner.

### **2.3 SITE CHARACTERISTICS**

Deferiet Paper Mill is located at 400 Anderson Avenue, Deferiet, NY 13628-0001. The current owners purchased the property in an auction for the value of scrap metal remaining on Site. The owners cut numerous large steam lines for the scrap metal and in the process exposed asbestos lagging. The facility is disused and in a severe state of disrepair with many of the buildings already collapsed. The original mill had a hydroelectric power-plant to generate steam which ran most of the machinery. The hydroelectric power-plant, along with an easement, was deeded to Erie Boulevard Hydropower LP (also known as Brookfield) which is still operational. This easement used to access the hydroelectric power-plant has exposed friable asbestos from the metal scrapping activities. This friable asbestos poses a health threat to workers who traverse the easement.

### **2.4 SITE BACKGROUND AND CONDITION**

Deferiet Paper Mill is located at 400 Anderson Avenue, Deferiet, NY 13628-0001. The current owners purchased the property in an auction for the value of scrap metal remaining on Site. The owners cut numerous large steam lines for the scrap metal and in the process exposed asbestos lagging. The facility is disused and in a severe state of disrepair with many of the buildings already collapsed. The original mill had a hydroelectric power-plant to generate steam which ran most of the machinery. The hydroelectric power-plant, along with an easement, was deeded to Erie Boulevard Hydropower LP (also known as Brookfield) which is still operational. The easement used to access the hydroelectric power-plant has exposed friable asbestos from the metal scrapping activities. This friable asbestos poses a health threat to workers who traverse the easement.

## **2.5 SCOPE OF WORK**

The purpose of this task order is to eliminate the threat of direct contact and off-site migration of friable asbestos containing material (ACM) from the exposed lagging where possible. In addition to providing the HASP, GES shall provide all necessary personnel, equipment and materials to perform the Statement of Work set forth below:

The scope of work for this site consists of the following:

- Mobilization
- Initial Site / Setup
- Apply encapsulant to the areas of exposed asbestos.
- Demobilization

## **3 PERSONAL PROTECTION EQUIPMENT**

Engineering and administrative controls will be employed on the Deferiet Paper Mill Site to eliminate and/or minimize exposure potential to the extent practicable. When identified hazards cannot be engineered out of the task, and safe work practices and other forms of administrative controls cannot provide sufficient protection or separation from the exposures, the last method of control is the use of personal protective equipment.

### **3.1 DESCRIPTION OF PROTECTION LEVELS**

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#### **3.1.1 Level C**

#### **EQUIPMENT REQUIRED:**

- Full face and or Half Face, air purifying respirator with GMC P100 HEPA cartridge
- Cartridges shall be changed daily unless any of the following occur:
  - Cartridge becomes hard to breathe through due to reaching capacity;
- Tyvek® or equivalent coveralls with taped seams, elastic hoods, wrists, and ankles (hoods will be taped to respirator face pieces)
- Coveralls/ Uniform
- Class II high visibility vest
- Steel toe boots, disposable boot covers (taped)
- Hard hat
- One pair of 4-mil nitrile inner gloves
- One pair of 15-mil nitrile outer gloves (gloves will be taped to the outer suit)
- Two way communication device.
- Inner (sample gloves) and outer work gloves depending on the application.
- Disposable boot covers
- Hearing Protection when necessary

PROTECTION PROVIDED:

Level C provides the same level of skin protection as Level B, but a lower level of respiratory protection.

SHOULD BE USED WHEN:

- All criteria for the use of air-purifying respirators are met.

LIMITING CRITERIA:

- Atmospheric concentration of chemicals must not exceed IDLH levels.
- The atmosphere must contain at least 20.0 percent oxygen.

**3.1.2 Modified Level D**

EQUIPMENT REQUIRED:

- Tyvek® or equivalent coveralls with taped seams, elastic hoods, wrists, and ankles
- Coveralls/ Uniform
- Class II high visibility vest
- Steel toe boots, disposable boot covers (taped)
- One pair of 4-mil nitrile inner gloves
- One pair of 15-mil nitrile outer gloves (gloves will be taped to the outer suit)
- Hearing protection when necessary.
- Inner and outer chemical-resistant gloves
- Chemical-resistant safety toe boots with disposable shoe covers
- Hard hat
- Safety Glasses
- Dust Masks

OPTIONAL:

- Face shield
- Chemical Splash Goggles

PROTECTION PROVIDED:

Protection from dust and contaminated surfaces where respiratory hazards have been characterized to below established exposure limits or site action levels.

SHOULD BE USED WHEN:

- The atmosphere contains no known hazard.

- Work functions involve splashes or immersion.
- Modified Level D should be used when no atmospheric hazards exist but potential for dermal exposure is expected.

**LIMITING CRITERIA:**

- Modified Level D should only be worn where respiratory hazards have been characterized and determined to be below established exposure limits or site action levels.
- May not be used in areas where respiratory hazards exist or may be expected to develop.

**3.1.3 Level D**

Level D shall only be worn in non-contaminated active work areas of the site.

**EQUIPMENT REQUIRED:**

- Proper fitting long pants in good repair with belt or suspenders as needed.
- Minimum 4" sleeve shirt
- High visibility class II vest
- Safety toe work boots
- Safety glasses with side shields
- Hard hat
- Hearing Protection when necessary

**OPTIONAL:**

- Leather Gloves
- Face shield

**PROTECTION PROVIDED:**

Level D provides minimal skin protection.

**SHOULD BE USED WHEN:**

- The atmosphere contains no known hazard.
- Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemical.

**LIMITING CRITERIA:**

- No respiratory protection provided.

#### **3.1.4 Respiratory Protection**

This health and safety plan procedure serves as the procedure for the use of respirators on the Deferiet Paper Mill Site. The upgrade level of protection will be Level C utilizing full face and Half Face respirators and Splash resistant coveralls. Exposures are not anticipated to be above the established action levels; however a conservative approach shall be taken to ensure personnel are adequately protected until additional information is learned regarding Site specific conditions and potential exposures.

#### **3.1.5 Continuing respirator effectiveness**

The RM/SSO is responsible for conducting daily site inspections. Daily site inspections shall include surveillance of work place conditions. In particular the following conditions shall be assessed:

1. Potential changes in contaminant concentration;
2. Changes in employee exposure levels;
3. Respirator effectiveness.

#### **3.1.6 Training**

Employees may be trained in a recent 40-hour or Emergency Response training course (within the last year), or a recent 8-hour refresher-training course, which covers the use of respiratory protection (within the last year).

#### **3.1.7 Fit Testing**

Before site personnel use any respirator with a negative or positive pressure tight-fitting face piece, the individual must be fit tested with the same make, model, style, and size of respirator that will be used. Any modifications to the respirator face piece for fit testing shall be completely removed, and the face piece restored to NIOSH-approved configuration, before that face piece can be used in the workplace.

#### **3.1.8 Fit testing period**

Fit test results are good for a period of one year. If an employee using a tight-fitting face piece respirator will be assigned a different respirator face piece (size, style, model or make) the fit testing must be repeated. Fit test results are voided whenever an employee experiences a change in physical condition that could affect respirator fit. Such conditions include, but are not limited to:

- Facial scarring
- Significant weight loss / gain
- Dental changes
- Cosmetic surgery

#### **3.1.9 Use of Respirators**

Employees are not allowed to use respirators with tight-fitting face pieces under following circumstances:

- Any condition that interferes with the ability of the respirator to form a proper seal and / or the valve function to operate properly.
- If an employee wears corrective glasses, obtain the appropriate spectacle kit and have it fitted with prescription lenses

#### **3.1.10 General Inspection and Repairs**

Respirators shall be checked for proper function before and after each use and during cleaning prior to exiting the CRZ. Ensure that all cartridges are clearly labeled and color-coded with the NIOSH approval label. Respirators that fail an inspection or are otherwise found to be defective should be immediately removed from service. Repairs to respirators are to be made only by persons appropriately trained to perform such operations (this does not include routine adjustments).

#### **3.1.11 Respirator cartridges changes**

All cartridge changes must be done in the Contamination Reduction Zone (CRZ). GMC P-100 filter cartridges shall be changed at least every 8 hours of use.

Employees shall also be advised that the cartridges must be changed immediately upon any of the following conditions.

- Breathing becomes difficult. This condition is usually caused in dusty conditions as well as areas of high humidity which will cause the cartridge to collect contaminants quicker.
- Manufacturer recommendations must also be consulted to assure proper use and change.

#### **3.1.12 Cleaning and Disinfecting**

Whenever respirators are doffed, employees shall wash their faces and respirator face pieces in order to prevent eye or skin irritation. Cleaning shall be accomplished by using the manufacturer's recommended cleaning solution.

#### **3.1.13 Storage**

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.

### 3.2 TASK-SPECIFIC LEVELS OF PROTECTION

FIELD ACTIVITIES COVERED UNDER THIS PLAN				
TASK DESCRIPTION	TYPE	PRIMARY	CONTINGENCY	ADDITIONAL INFORMATION(*)
1. Mobilization	Non-Intrusive	Level D	Modified D	<ul style="list-style-type: none"> <li>Begin work Level D</li> <li>Upgrade to Modified D if contact hazard present</li> </ul>
2. Site Setup	Non-Intrusive	Level D	Modified D	<ul style="list-style-type: none"> <li>Begin work Level D</li> <li>Upgrade to Modified D if contact hazard present</li> </ul>
3 Use articulating lift to reach areas in an easement where there is exposed asbestos piping. Apply encapsulant to the areas of exposed asbestos.	Non-Intrusive	Level C	Level B	<ul style="list-style-type: none"> <li>Level C Tyvek coveralls, Nitrile gloves and GMC P100 cartridges, Latex Boot Covers</li> <li>Upgrade Level C PPE – Saranex coveralls, PVC gloves and GMC P100 cartridges, Latex Boot Covers</li> <li>Upgrade to Level C splash resistant if splash hazard is present</li> </ul>
9. Site Demobilization	Non-Intrusive	Level D		<ul style="list-style-type: none"> <li>Level D</li> </ul>

- Refer to Section 4.4.2 Preliminary Task Hazard Analysis for further information.

## **4 SITE HAZARDS**

### **4.1 CHEMICAL HAZARDS**

Previous investigations and evaluations of the Deferiet Paper Mill Site have provided information on the potential hazards that may be encountered. Based upon this information, asbestos is of primary concern.

#### **4.1.1 Chemical Hazards Summary**

##### ***Asbestos***

Asbestos is a generic term used to describe a group of six different naturally occurring fibrous minerals (amosite, chrysotile, crocidolite, and the fibrous varieties of tremolite, actinolite, and anthophyllite) that can be separated into fibers and spun into cloth or added to products. It was used in many construction materials because of its excellent insulation, fire proofing, friction resistance, and sound proofing qualities. Asbestos is a known carcinogen and is thus a regulated substance. Asbestos is dangerous when it is crushed, crumbled or disturbed because fibers can be released into the air. Released asbestos fibers are so tiny they can remain suspended in the air for long periods of time and can easily be inhaled. The degree to which asbestos-containing materials will release fibers is related to its friability.

Exposures to high levels of asbestos fibers can lead to an increased risk of:

- Asbestosis, in which the lungs become scarred with fibrous tissue.
- Lung cancer;
- Mesothelioma, a cancer of the lining of the chest and the abdominal cavity; and

The risk of lung cancer and mesothelioma increases with the number of fibers inhaled. The risk of lung cancer from inhaling asbestos fibers is also greater if you smoke. People who get asbestosis have usually been exposed to high levels of asbestos for a long time. The symptoms of these diseases do not usually appear until about 20 to 30 years after the first exposure to asbestos.

Asbestos material that would crumble easily if handled, or that has been sawed, scraped, or sanded into a powder, is more likely to create a health hazard. Chrysotile asbestos is unique in that it has a serpentine fiber-formation (curled fibers) compared to the amphibole fiber-formation (straight, needle-like fibers) of the other five asbestos types. Chrysotile asbestos is less friable (less-likely to be inhaled) than other types of asbestos. In comparison to amphiboles, chrysotile fibers are generally finer with higher flexibility and good heat resistance. Chrysotile is known as the most common asbestos mineral, and accounts for 90 to 95 percent of asbestos used in commercial applications in the United States.

Each worker shall, before leaving the work area, clean the outside of the respirators and outer protective clothing by wet cleaning and/or HEPA vacuuming. The outer disposable suit shall be removed in the work area and placed in a labeled ACM 6 mil. poly disposal bag. The worker shall

then proceed into the decontamination trailer. The respirator shall be removed and rinsed in the shower. Following showering and drying off, each worker shall proceed directly to the clean room, dress in street clothes and exit the decontamination enclosure system immediately.

COMPOUND	Hazards		
Asbestos	TWA 0.1 fiber/cc	Excursion of 30 minutes not to exceed 1.0 fiber/cc	

## **4.2 PHYSICAL HAZARDS**

### **4.2.1 Slips, Trips, and Falls**

A thorough hazard assessment was conducted at the Deferiet Paper Mill Site upon initial mobilization to identify all concerns and hazards onsite and will be continued thereafter proactively in all work areas. Personnel shall take extra precaution when maneuvering on-site and pay close attention to potential trip hazards. Team members will conduct inspections of individual work areas and travel paths. If a hazard cannot be immediately addressed it should be flagged with a ribbon or yellow construction/caution tape to identify the hazard or barricaded if necessary. Properly storing equipment/tools and removing debris and materials from established walking paths are precautions that will be standard operating procedures. Whenever possible, walking surfaces will be designated and maintained to provide as level as possible of a walking surface. If areas are to be used repeatedly for foot traffic such as access to storage, rest areas, and support facilities it will be required to designate and maintain proper access to these locations.

#### **Precautions:**

- Stumbling while carrying loads. NEVER carry items in a position that blocks your vision.
- Use footwear with ankle support and soles that grip.
- Don't carry heavy loads, use hauling equipment/drum cart or ask your buddy for assistance.
- Practice good housekeeping.
- Fill in or mark hidden holes in ground in staging area.
- Establish travel paths or walkways through work areas. Keep them clear to minimize trip hazards. Remove dropped objects from pathways immediately.
- Ensure that additional equipment brought to the location does not create or pose additional slip, trip and fall hazards.
- Keep electric cords and cables out of travel paths and walkways. If this is not feasible, protect the cord to avoid creating trip hazards and to prevent damage to the cords, cables and lines.
- Establish barriers and/or mark areas around known hazards such as holes and overhead hazards.
- Take extra care when stepping onto unstable or uneven surfaces, and onto surfaces where the hazard cannot be seen (e.g., underwater surfaces).
- Clean up spilled material as soon as practical to avoid creating a slip hazard.

- Install steps and ramps and properly maintain them. Include slip-resistant treads and smooth handrails that will not cause punctures or lacerations.
- Closely inspect ladders and steps to ensure steps are free and clear of sediment, grease, oil or debris that could cause a slipping hazard.

#### **4.2.2 Back Strain / Material Handling**

Mechanical means of lifting is the most preferred method and should be used whenever possible when handling heavy or bulky loads. When a mechanical means of lifting is not available, proper lifting techniques shall be used. Personnel shall lift with their legs, keeping their backs straight, and loads close to their bodies. Avoid twisting at the waist during lifting. Personnel shall receive help from others when loads appear to be too heavy or bulky. Extreme care should be taken when lifting and handling heavy or bulky items to avoid back injuries.

The following fundamentals address the proper lifting techniques that are essential in preventing back injuries:

- The size, shape, and weight of the object to be lifted must first be considered.
- Multiple employees or the use of mechanical lifting devices are required for heavy objects.
- The anticipated path to be taken by the lifter should be considered for the presence of slip, trip, and fall hazards.
- The feet will be placed far enough apart for good balance and stability (typically shoulder width).
- The worker will get as close to the load as possible. The legs will be bent at the knees.
- The back will be kept as straight as possible and abdominal muscles should be tightened.
- Twisting motions should be avoided when performing manual lifts.
- To lift the object, the legs are straightened from their bending position.
- A worker will never carry a load that cannot be seen over or around.

When placing an object down, the stance and position are identical to that for lifting. The legs are bent at the knees and the object lowered. When two or more workers are required to handle the same object, workers will coordinate the effort so that the load is lifted uniformly and that the weight is equally divided between the individuals carrying the load. When carrying the object, each worker, if possible, will face the direction in which the object is being carried. In handling bulky or heavy items, the following guidelines will be followed to avoid injury to the hands and fingers:

- A firm grip on the object is essential; leather gloves will be used if necessary.
- The hands and object will be free of oil, grease, and water which might prevent a firm grip. The fingers will be kept away from any points that could cause them to be pinched or crushed, especially when setting the object down.
- The item will be inspected for metal slivers, jagged edges, burrs, and rough or slippery surfaces prior to being lifted.

#### **4.2.3 Overhead Hazards**

Investigation of all access routes shall be conducted immediately upon arrival to ensure all routes leading into the site are safe from potential overhead hazards. This shall be conducted prior to the delivery of both equipment and materials on-site. In the event of a low hanging line, the local electric company in Deferiet shall be immediately contacted and the transport of equipment will be staged at a safe distance until representatives with the electric company gives assurance that the line in question has been addressed. All power lines shall be treated as live wires until assured safe by the electric company. Proper clearances must be maintained at all times. Equipment shall not deviate from established travel ways or work areas where clearances are unknown/ insufficient.

#### **4.2.4 Noise**

Areas or equipment emitting noise at or above 85 DBA shall be evaluated to determine feasible engineering controls. When engineering controls are not feasible, administrative controls can be developed and appropriate hearing protection will be provided. A selection of hearing protection will be maintained on site for personnel to choose from and will be maintained in a clean and reliable condition. A good rule of thumb to keep in mind is if you have to raise your voice to talk to coworkers standing only three feet away, you are likely subjected to noise exposures exceeding 85 decibels and should use hearing protection.

#### **4.2.5 Electrical**

Only qualified personnel are authorized to work on electrical circuits or repair any electrical equipment. GES Lock Out-Tag Out procedures shall be used before any maintenance is performed. Extension cords will be inspected daily and all damaged cords will be taken out of service (tagged and removed from Site). Ground fault circuit interrupters (GFCI) will be used on all temporary electrical circuits (i.e., generators, etc.). Electrical cords not specifically made for water submersion will be kept out of wet areas. Electrically operated equipment may present the hazard of electrical shock, especially due to potentially wet operating environments. If using equipment or portable tools that are electrically powered, follow the safety precautions listed below:

- Lock out/tag out all energized equipment before performing maintenance on the equipment.
- Check to see that electrical outlets used to supply power during field operations are of the three wire grounding type.
- Extension cords used for field operations should be of the three wire grounding type and designed for hard or extra-hard usage. This type of cord uses insulated wires within an inner insulated sleeve and will be marked S, ST, STO, SJ, SJO, or SJTO.
- Never remove the ground plug blade to accommodate ungrounded outlets.
- Do not use extension cords as a substitute for fixed or permanent wiring. Do not run extension cords through openings in walls, ceilings, or floors. Extension cords are not to be permanently attached to walls with staples, nails, etc.
- Protect the cord from becoming damaged, paying special attention at locations where the cord is run through doorways, windows or across pinch points.
- Examine extension and equipment cords and plugs prior to each use. Damaged cords with frayed insulation or exposed wiring and damaged plugs with missing ground blades Must

Be removed from service immediately. The cord / equipment should be tagged and removed from the site.

- All portable or temporary wiring which is used outdoors or in other potentially wet or damp locations must be connected to a circuit which is protected by a ground fault circuit interrupter (GFCI). GFCI's are available as permanently installed outlets, as plug-in adapters and as extension cord outlet boxes. Do not continue to use a piece of equipment or extension cord which causes a GFCI to trip.
- Do not touch a victim who is still in contact with current. Separate the victim from the source using a dry, nonmetallic item such as a broomstick or cardboard box. Be sure your hands are dry and you are standing on a dry surface. Turn off the main electrical power switch and then begin rescue efforts.

#### **4.2.6 Small Quantity Flammable/Combustible Materials**

Small quantities of flammable/ combustible materials shall be stored in “safety” cans with appropriate flame arrestors, self-closing lids, and labeled according to their contents. Plastic type fuel cans are not acceptable for any reason.

#### **4.2.7 Fall Protection**

Walking/working surface with an unprotected side, edge, or floor openings, from which there is a possibility of falling four feet or more to lower level or where there is a possibility of a fall from any height onto dangerous equipment, into a hazardous environment, or onto an impalement hazard. Fall hazards shall be addressed through the use of passive fall protection systems (erecting guardrails, fall restraint, travel restraint) along with administrative controls and training. For significant fall hazards it is advisable to have two protective systems, a primary and secondary system as a back-up when feasible. If the primary system fails, the secondary system will be activated to protect Site personnel from the fall hazard. A fall hazard survey will be conducted to identify all potential fall hazards on the Deferiet Paper Mill Site, and identify options for elimination and/or selecting other control measures. The survey will be conducted by the competent person. The structural integrity of walking/working surfaces shall be closely inspected and surveyed to ensure the surfaces on which employees are to conduct tasks have the strength and structural integrity to safely support the workers and equipment. Employees shall not be permitted to work on those surfaces until it has been determined that the surfaces have the requisite strength and structural integrity to support the workers and equipment related to their tasks. Once it has been determined that the surface is safe for employees to work on, then it should be determined if a fall hazard exists at the work location.

#### **4.2.8 Aerial Lift Safety**

An Aerial lift will be used on the Deferiet Paper Mill Site to provide a safe elevated work platform to allow personnel to apply a rubberized coating over exposed asbestos material. Both active and passive fall protection will be used at all times during operation of the aerial lift. The aerial lifts guardrails shall serve as passive fall protection, while personnel will be outfitted in full body harnesses and a fall restraint lanyard attached to the designated anchor point. Fall protection equipment will be inspected daily before use. Prior to operating the aerial lift a pre-use

inspection will be completed per the manufacturers recommended procedures. Great care will be taken when maneuvering the aerial lift from one work area to the next. The work area is very congested between the on-site buildings and will require that the operator and spotter use caution in positioning the lift. Personnel will pay close attention to overhead hazards, closely inspecting the surrounding area for potential hazards and changing conditions.

#### **General Safe Work Practices**

- Prior to operating the lift, the operator shall walk completely around the machine to ensure the area surrounding the equipment is clear. The lower controls on the aerial lift override the upper controls. The lower level control shall not be operated unless permission has been obtained from the employee in the lift (except in case of emergency).
- Weather conditions will be closely monitored. The aerial lift will not be operated during storms or any weather conditions that may produce lightening or high winds (greater than 25 mph).

Tip-over and collapse are serious hazards associated with aerial lifts. Reduce this hazard by observing the following precautions:

- Never exceed the manufacturer's specified maximum load (which includes the weight of personnel and all tools/supplies/equipment, etc. that will be on the platform).
- Do not operate on surfaces that exceed the manufacturer's maximum slope (typically 5% or less). Always use wheel chocks and brakes when operating on any slope.
- Prior to moving the equipment, the route shall be walked to detect holes, debris, changes in elevation, or depressions.
- Maintain the intended center of gravity by evenly dispersing loads on the platform. Do not hang tools or equipment off the sides or rails of the platform.
- Enter and exit the platform only through the intended access point.
- Personnel shall keep both feet firmly on the floor of the platform at all times, and not attempt to gain additional reach by standing on the guardrail or items within the platform.
- Do not lean on or over the rails. Do not sit, stand, or climb on the guardrails.
- Maintain good housekeeping within the aerial lift to prevent slip/trip hazard
- Position equipment so that the weight is evenly distributed.
- Enter and exit the platform only when it is fully lowered.

### **4.3 ENVIRONMENTAL HAZARDS**

Personnel have the potential to be exposed to both heat and cold stress during planned work activities on the Deferiet Paper Mill Site. Personnel will be monitored for signs of exposure based on the weather and site-specific conditions.

#### **4.3.1 Heat Stress**

During the warmer months, the combination of seasonal temperatures and the additional heat stress added by additional personal protective equipment could impose high temperatures on site personnel. Personnel shall remain hydrated throughout the work day and take breaks as needed to cope with temperatures. Heat stress standard operating procedures should be reviewed and

followed. If higher than average temperatures are experienced on-site or conditions arise that may potentially lead to heat stress, additional monitoring may become necessary. The buddy system shall be followed at all times, team members will maintain visual contact with each other and be alert for signs of heat stress:

- Changes in complexion or skin color
- Changes in coordination or demeanor
- Excessive salivation and pupillary response
- Changes in speech pattern
- Mention of headaches, dizziness, blurred vision
- Nausea, cramps
- Irritation of eyes, skin, or respiratory tract

The following general precautions are added as guidelines to reduce the potential of work related heat stress and should be followed:

- Training in the prevention and recognition of heat stress symptoms;
- Encourage proper physical fitness and diet in employees;
- Maintain fluid intake (prevent dehydration);
- Avoid alcohol or excessive caffeine consumption.
- Modify, as needed, work schedule and break times.
- Use of the buddy system;
- Availability of shaded and cooled rest areas and personal cooling devices.

#### **4.3.2 Heat Exhaustion**

Heat exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating. At the first signs, personnel should immediately stop work, get out of the sun and find a cool, shady or air-conditioned location to rest. Have the individual drink fluids and monitor very closely.

Symptoms:

- Headache, dizziness, or fainting
- Weakness
- Irritability or confusion
- Extreme thirst, nausea or vomiting

#### **4.3.3 Heat Stroke**

Heat stroke is the most serious heat-related disorder. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes.

Symptoms:

- May be confused, unable to think clearly, pass out, collapse, or have seizures

- May stop sweating
- Hallucinations
- Chills
- Slurred speech

**Precautions to take if personnel become ill from heat stress**

- Immediately call Response Manager / SSO
- Have someone stay with the worker until help arrives
- Move the worker to a cooler/shaded area
- Remove outer clothing, Hard Hat, Vest
- Fan or mist the worker with water; apply ice, ice bags wrapped in towel if air-conditioned room or vehicle is not nearby.
- Provide cool drinking water.
- If the worker is not alert, unresponsive, very confused, and stops sweating, immediately call 911 and apply ice as soon as possible.

**4.3.4 Cold Stress**

Cold Stress is the cooling of the body core to a sub-normal temperature. As the body cools, blood vessels in the extremities (arms and legs) constrict so that the warm blood will remain at the body core and supply the vital organs. If the body temperature continues to drop, heat is generated through shivering. Further heat loss will result in speech difficulty, loss of manual dexterity, slow reactions, mental confusion, and muscle rigidity do to cold blood circulation. If cold blood reaches the heart and brain, heart failure and coma will occur. Death will occur when the body core temperature falls below 78 F.

Wearing appropriate clothing and being aware of how your body is reacting to the cold are important to preventing cold stress. Avoiding alcohol, certain medications and smoking can also help to minimize the risk. Protective clothing is the most important way to avoid cold stress. The type of fabric also makes a difference, cotton loses its insulation value when it becomes wet. Wool, silk and most synthetics, on the other hand, retain their insulation even when wet. The following are recommendations for working in cold environments:

- Wear layers of clothing that may easily be shed throughout the day. An inner layer of wool, silk or synthetic to wick moisture away from the body. A middle layer of wool or synthetic to provide insulation even when wet. An outer wind and rain protection layer that allows some ventilation to prevent overheating if necessary.
- Wear a hat or hood. Up to 40% of body heat can be lost when the head is left exposed.
- Wear insulated boots or other footwear.
- Keep a change of dry clothing available in case work clothes become wet.
- With the exception of the wicking layer do not wear tight clothing. Loose clothing allows better ventilation of heat away from the body.

- Do not underestimate the wetting effects of perspiration. Often times wicking and venting of the body's sweat and heat are more important than protecting from rain or snow.

Personnel should drink plenty of liquids, avoiding caffeine and alcohol. It is easy to become dehydrated in cold weather. If possible, heavy work should be scheduled during the warmer parts of the day. Closely follow the buddy system and avoid fatigue since energy is needed to keep muscles warm. Take frequent breaks and consume warm, high calorie food such as pasta to maintain energy reserves.

Cold stress may develop if personnel are exposed to cold, wind, and/or rain or immersed in cold water while performing HAZWOPER activities. Whenever employees are required to work in ambient temperatures of less the 40 F, cold stress prevention protocols will be implemented. The following daily (8 hour work shift) exposure time limits will be instituted.

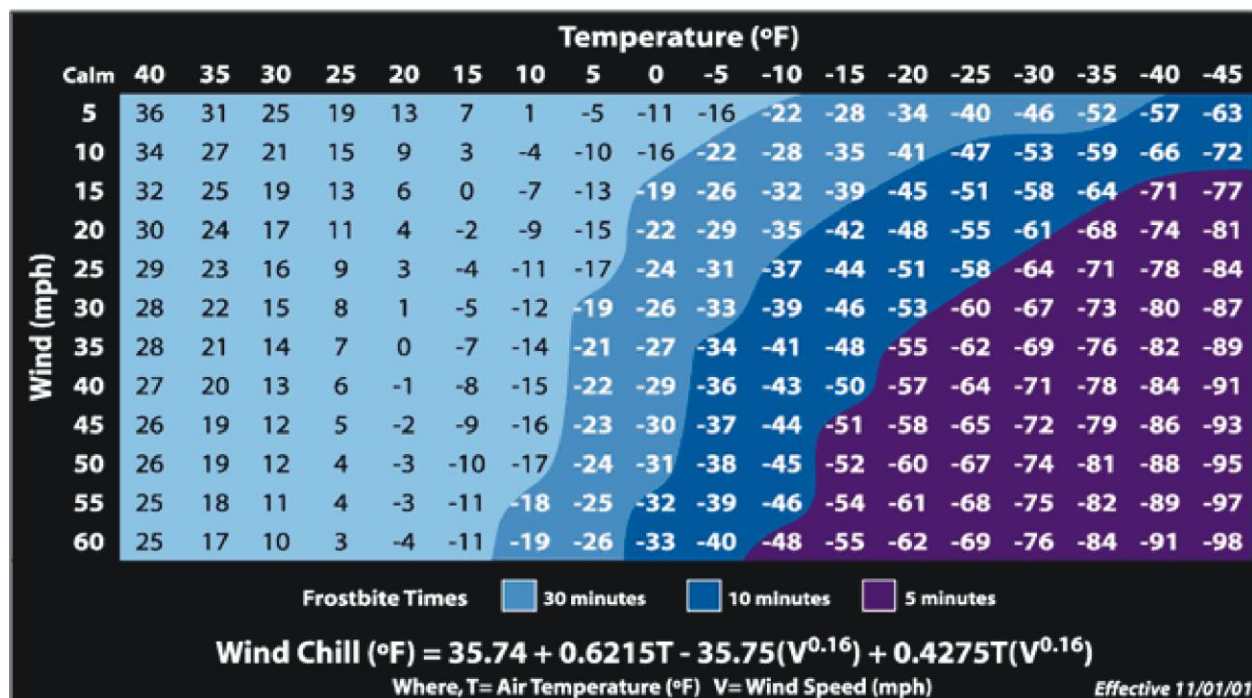
**WORK/WARM-UP SCHEDULE FOR FOUR-HOUR SHIFTS**

Air Temperature – Sunny Sky		No Noticeable Wind		5 mph Wind		10 mph Wind		20 mph Wind	
°C	°F	Max. Work Period	No. Of Breaks	Max. Work Period	No. Of Breaks	Max. Work Period	No. Of Breaks	Max. Work Period	No. Of Breaks
-26 to -28	-15 to -19	Normal Breaks (1)		Normal Break (1)		75 min.	2	40 min.	4
-29 to -31	-20 to -24	Normal Breaks (1)		75 min.	2	55 min.	3	30 min.	5
-32 to -34	-25 to -29	75 min.	2	55 min.	3	40 min.	4	Non-emergency work should cease	
-35 to -37	-30 to -34	55 min.	3	40 min.	4	30 min.	5		
-38 to -39	-35 to -39	40 min.	4	30 min.	5	Non-emergency work should cease			
-40 to -42	-40 to -44	30 min.	5	Non-emergency work should cease					
< -42	< -44	Non-emergency work should cease							

In addition to ambient temperature and wetness of the body, velocity of the wind will influence the development of a cold injury. Wind chill is described the cooling effect of moving air in combination with low temperature. **ALL SITE PERSONNEL SHOULD REVIEW THE ENCLOSED WIND CHILL INDEX.**



## Wind Chill Chart



The table below presents the types of cold weather injuries:

### COLD WEATHER INJURIES

#### FROSTBITE

CAUSE	SYMPTOMS	FIRST AID
Freezing of tissue, normally due to exposure below 32°F.	Numbness in affected area. Tingling, blistered, swollen, or tender areas. Pale, yellowish, waxy-looking skin.	Warm affected area with cloth layer between skin and heat source. Consult with medical personnel ASAP. <b>Do not</b> thaw frozen area if treatment will be delayed. <b>Do not</b> massage or rub affected area. <b>Do not</b> wet area or rub with snow or ice.

#### CHILBLAIN

CAUSE	SYMPTOMS	FIRST AID
Repeated exposure of bare skin for prolonged periods to temperatures from 20°F to 60°F (for those not acclimated to cold weather).	Swollen red skin. Tender, hot skin, usually accompanied by itching.	Warm affected area with direct body heat. <b>Do not</b> massage or rub. <b>Do not</b> wet area or rub with snow or ice. <b>Do not</b> expose affected area to open fire, stove, or any other intense heat source.

#### IMMERSION FOOT (TRENCH FOOT)

CAUSE	SYMPTOMS	FIRST AID
Prolonged exposure of feet to wet condition at temperatures between 32E to 50E F. Inactivity and damp socks and boots (or tightly laced boots that impair circulation) speed onsite and severity).	Cold, numb feet may progress to hot with shooting pains. Swelling, redness, and bleeding.	Rewarm feet by exposing them to warm air. Evacuate victim to a medical facility. <b>Do not</b> massage, rub, moisten, or expose affected area to extreme heat.

#### DEHYDRATION

CAUSE	SYMPTOMS	FIRST AID
Depletion of body fluids.	Dizziness and weakness.	Replace lost water. Water should be sipped, not gulped. Get medical treatment.

#### HYPOTHERMIA

CAUSE	SYMPTOMS	FIRST AID
Prolonged cold exposure and body heat loss. May occur at well above freezing, especially when a person is immersed in water.	Lack of shivering. Drowsiness, mental slowness, lack of coordination. Can progress to unconsciousness, irregular heartbeat, and death.	Strip off clothing and wrap victim in blankets or a sleeping bag. Get victim to a heated location and medical treatment ASAP.

#### COLD STRESS PREVENTION

Temperature	Preventative Action
< 61°F	Use thermometer to measure ambient temperature
< 40 °F	Cold weather protective clothing available; check core body temperature using oral or ear thermometer. Maintain core body temperature above 96.8°F to avoid hypothermia.
< 30°F	Record ambient temperature and wind speed every four hours; compare to wind chill chart when below 19.4°F
< 19°F	Provide and use heated warming shelters.
< 10°F	Constant observation of workers (“buddy system”); rest in heated shelters (see work-rest schedule); dry clothing available for change out; acclimate new workers.
< 0°F, > 5 mph wind	Obtain medical certification for workers subject to hypothermia risk.

#### 4.3.5 Severe Weather

The weather will be closely monitored by the response manager and arrangements made to ensure that site personnel are prepared for inclement weather. Anticipated weather conditions will be discussed in the morning safety meetings and any pertinent information will be shared with team members. In the event of inclement weather, particularly an electrical storm, operations will be temporarily suspended until the system passes.

During severe weather, outdoors operations will be stopped under these conditions:

- **Lightning** within 20 miles of the site. Lightning has been known to strike within a radius of 8 miles from cloud to ground. Depending on the severity of the storm the speed at which it can move into the immediate area can be swift therefore notification of work stoppage to all crews must be immediate. Crews shall discontinue operations, meet at a predetermined staging area and wait for further instructions.
  - In evaluating the time when it is safe for crews to resume work, the following method will be used. The supervisor will wait 30 minutes after the first lightning strike to evaluate the weather conditions. The 30-minute wait clock will be reset after each additional lightning strike.
- **Heavy Precipitation** that affects visibility, mobility, or the overall conditions in which equipment and personnel can operate safely.
- **Sustained Wind** in excess of 20 MPH may create hazardous conditions when excavating test pits. The wind can cause dust to become airborne and cause eye irritation as well as spread contamination off site. Dust suppression methods may not be as effective due to the drying effect of the wind.

After the heavy weather has left the area, the RM/SSO will determine that operations can continue in a safe manner. The “all clear” signal will be given and personnel will return to work.

#### 4.3.6 Historical Weather Averages for Deferiet, New York.

Monthly Weather Averages & Records for Deferiet New York - °F   °C						
Date	Average Low	Average High	Record Low	Record High	Average Precipitation	Average Snow
<a href="#">January</a>	9°	28°	-34° (1981)	66° (1950)	3.54"	32.3"
<a href="#">February</a>	11°	30°	-31° (1961)	64° (2000)	2.48"	19.9"
<a href="#">March</a>	22°	40°	-21° (1950)	82° (1990)	2.86"	12.5"
<a href="#">April</a>	35°	53°	2° (1972)	92° (1990)	3.06"	3.6"
<a href="#">May</a>	47°	66°	23° (1966)	89° (2006)	3.33"	0.2"
<a href="#">June</a>	56°	75°	30° (1945)	96° (1933)	3.4"	0"
<a href="#">July</a>	61°	79°	41° (1953)	98° (1931)	3.32"	0"
<a href="#">August</a>	60°	78°	36° (1940)	97° (2002)	3.95"	0"
<a href="#">September</a>	51°	69°	27° (1947)	96° (1953)	4.59"	0"
<a href="#">October</a>	39°	57°	15° (1936)	85° (1926)	3.77"	0.5"

<a href="#">November</a>	30°	45°	-3° (1933)	76° (1938)	4.51"	7.4"
<a href="#">December</a>	17°	33°	-39° (1933)	69° (2001)	3.76"	26.3"

November Daily Averages & Records - °F   °C						
Date	Average Low	Average High	Record Low	Record High	Average Precipitation	Average Snow
Nov 1	35°	51°	24° (1937)	72° (1935)	0.14"	NA
Nov 2	34°	50°	15° (1965)	74° (1950)	0.14"	NA
Nov 3	34°	50°	17° (2002)	74° (1971)	0.14"	NA
Nov 4	34°	50°	19° (1989)	73° (1961)	0.14"	NA
Nov 5	34°	49°	19° (1965)	69° (1940)	0.14"	NA
Nov 6	33°	49°	10° (1951)	73° (1948)	0.15"	NA
Nov 7	33°	48°	17° (2002)	76° (1938)	0.15"	NA
Nov 8	33°	48°	14° (1991)	74° (1975)	0.15"	NA
Nov 9	33°	48°	15° (1971)	72° (1975)	0.15"	NA
Nov 10	32°	47°	14° (1956)	68° (1931)	0.15"	NA
Nov 11	32°	47°	14° (1933)	69° (1966)	0.15"	NA
Nov 12	32°	46°	5° (1933)	65° (2002)	0.15"	NA
Nov 13	31°	46°	10° (1983)	68° (1964)	0.16"	NA
Nov 14	31°	46°	11° (1983)	62° (1930)	0.16"	NA
Nov 15	31°	45°	0° (1939)	68° (1994)	0.16"	NA
Nov 16	30°	45°	-3° (1933)	67° (1956)	0.16"	NA
Nov 17	30°	44°	1° (1933)	70° (1931)	0.16"	NA
Nov 18	30°	44°	9° (1936)	69° (1963)	0.16"	NA
Nov 19	29°	43°	4° (1936)	73° (1958)	0.16"	NA
Nov 20	29°	43°	7° (1959)	71° (1985)	0.16"	NA
Nov 21	28°	43°	7° (1933)	70° (1953)	0.15"	NA
Nov 22	28°	42°	6° (1972)	65° (1931)	0.15"	NA
Nov 23	27°	42°	3° (2000)	69° (1931)	0.15"	NA

Nov 24	27°	41°	0° (1938)	70° (1931)	0.15"	NA
Nov 25	27°	41°	3° (2000)	65° (1979)	0.15"	NA
Nov 26	26°	41°	1° (1938)	67° (1979)	0.15"	NA
Nov 27	26°	40°	4° (1928)	67° (1979)	0.15"	NA
Nov 28	25°	40°	3° (1926)	65° (1990)	0.15"	NA
Nov 29	25°	39°	0° (1930)	71° (1990)	0.14"	NA
Nov 30	24°	39°	0° (1936)	65° (2006)	0.14"	NA

#### **4.3.8 Biting Insects and Poisonous Vegetation**

There is a high likelihood that site personnel will encounter ticks and poisonous vegetation on the Deferiet Paper Mill Site. During the initial site walk team members encountered a heavy infestation of ticks on-site. Personnel should maintain a high level of awareness and conduct inspections of clothing and work areas. Site investigations to identify these hazards (poisonous vegetation / ticks and biting insects) before work related activities begin are essential. Under no circumstances should personnel that are typically allergic participate in these initial hazard assessments. Due to the heavy infestation of ticks on the Deferiet Paper Mill Site, team members will be treating their clothes with a 5 - 10% concentration of Permethrin to prevent. The active ingredient in Permethrin is a synthetic molecule similar to pyrethrum which is taken from the Chrysanthemum flower.

Wasps/hornets/bees and other stinging insects encountered on site present a serious hazard to those workers who are allergic. Employees whom are allergic should notify the Response Manager/co-workers prior to starting operations and make known the degree of allergic reactions experienced in the past, and inform others of the location of medicine/shots that need to be taken in the event of being stung. In the event of a bee/wasp sting, monitor the employee, if a stinger is present, remove it carefully with tweezers. Wash and disinfect the wound, cover it, and apply ice. Continue to monitor the employee watching for allergic reaction; contact a doctor immediately if a reaction develops or 911 if the reaction is severe. **Be sure to report any bite, sting, or any injury to the Response Manager/SSO, no matter how minor or insignificant the injury/bite may seem.**

##### **4.3.8.1 Ticks**

Ticks typically are in wooded areas, bushes, tall grass and brush. Ticks are black, black and red, or brown and can be up to one-quarter inch in size. In some geographic areas exposure is not easily avoided. Wear tightly woven light-colored clothing with long sleeves and pant legs tucked into boots, spray only outside of clothing with permethrin and spray skin with only DEET, and check frequently for ticks. Use the buddy system and perform tick inspections prior to entering vehicles and the office trailer. **Be sure to report any bite, sting, or anything suspicious to the RM/SSO immediately, no matter how insignificant it may seem.**

### ***Lyme disease***

Lyme disease is the most commonly reported tick-borne disease in the United States. Last year, more than 22,500 confirmed and 7,500 probable cases of Lyme disease were reported to the Centers for Disease Control and Prevention (CDC). Lyme disease is passed to humans by the bite of black-legged ticks (also known as deer ticks in the eastern United States) and western black-legged ticks infected with the bacterium *Borrelia burgdorferi*. The Lyme disease bacterium normally lives in mice, squirrels, and other small mammals.

Last year, the highest number of confirmed Lyme disease cases were reported from New Jersey, Pennsylvania, Wisconsin, **New York**, Massachusetts, Connecticut, Minnesota, Maryland, Virginia, New Hampshire, Delaware, and Maine. U.S. workers in the northeastern and north-central States are at highest risk of exposure to infected ticks. Ticks may also transmit other tick-borne diseases to workers in these and other regions of the country. Personnel should be extra careful to protect themselves in the late spring and summer when young ticks are most active.

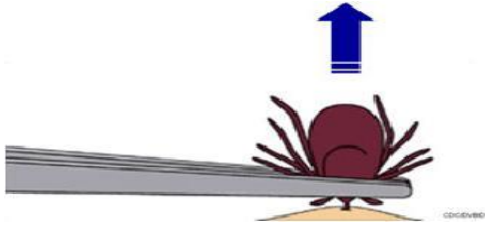
Below is an example on how to prevent ticks from entering pants legs:

Recommendations for protection against tick bites:

- Wear a hat and light-colored clothing, including long-sleeved shirts and long pants tucked into boots or socks.
- Use insect repellents that provide protection for the amount of time you will be outdoors
- Check your skin and clothes for ticks every day. The immature forms of these ticks are very small and may be hard to see.
- Remember to check your hair, underarms, and groin for ticks.
- Immediately remove ticks from your body using fine-tipped tweezers.
- Grasp the tick firmly and as close to your skin as possible.
- Pull the tick's body away from your skin with a steady motion.
- Clean the area with soap and water.
- Removing infected ticks within 24 hours reduces your risk of being infected with the Lyme disease bacterium.
- Wash and dry work clothes in a hot dryer to kill any ticks present.

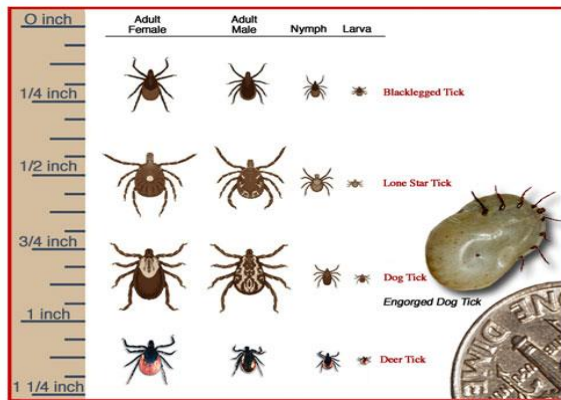
### **Proper tick removal**





### *Symptoms of Lyme disease*

- An expanding circular rash called erythema migrans (may look like a red bulls-eye at the site of the tick bite)
- Fever
- Joint and muscle pains
- Headache
- Chills
- Fatigue
- Swollen lymph nodes



It is extremely important that all injuries/bites/stings be immediately reported to the RM/SSO, no matter how minor or insignificant it may seem. The successful treatment and recovery of illnesses such as Lyme disease is determined on how quickly it is identified and treated. If any personnel exhibit signs or symptoms consistent with the above (regardless if a known bite has occurred), immediately notify the RM.

#### **4.3.8.2 Mosquitoes**

It is recommended that preventative measures be taken to reduce the probability of being bitten by mosquitoes whenever possible. Mosquitoes are believed to be the primary source for exposure to the West Nile Virus as well as several other types of encephalitis. The following guidelines should be followed to reduce the risk of these concerns for working in areas where mosquitoes are prevalent.

- Wear long-sleeved shirts and long pants whenever you are outdoors.

- Spray clothing with repellents containing permethrin or DEET since mosquitoes may bite through thin clothing.
- Apply insect repellent sparingly to exposed skin. An effective repellent will contain 35 percent DEET (N,N-diethyl-meta-toluamide). Repellents may irritate the eyes and mouth, so avoid applying repellent to the hands.
- Whenever an insecticide or insect repellent is used, be sure to read and follow the manufacturer's directions for use, as printed on the product.
- Note: Vitamin B and "ultrasonic" devices are NOT effective in preventing mosquito bites.

### ***West Nile Virus***

Most infections are mild, and symptoms include fever, headache and body aches, occasionally with skin rash and swollen lymph glands. More severe infection may be marked by headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, rarely, death. The West Nile Virus incubation period is from 3 to 15 days.

### ***4.3.8.4 Spiders***

It is regarded by many as the most dangerous spider in the United States. Because of interstate shipping/transportation, the Brown Recluse Spider can be found most anywhere in the United States. The average Brown Recluse Spiders are usually 1 inch or larger in size, including the legs and can grow as large as 3 inches, obviously the young Brown Recluse Spiders are much smaller. Brown recluse spider bites do not always hurt right away. In fact, bites may not be known or apparent until other symptoms appear.

Symptoms of a brown recluse spider bite may include the following:

- Reddened skin followed by a blister that forms at the bite site.
- Mild to intense pain and itching for 2 to 8 hours following the bite.
- An open sore with a breakdown of tissue (necrosis) that develops within a few hours to 3 to 4 days following the bite and the area may become painful, itchy, hot, swollen, red and tender. An irregular ulcerous sore, caused by necrosis, will often appear that is from 1/4 inch to 10 inches in diameter. Prompt attention is the best defense against preventing the necrosis. The wound is often described as being reddish and surrounded by a bluish area with a narrow whitish separation in between the red and the blue. This gives it the famous "bull's-eye" pattern. In just hours, a bite from the highly venomous Brown Recluse Spider can create blisters and cause tissue damage.



### ***Brown Recluse***

Some people have a severe, systemic (whole-body) reaction to brown recluse spider bites, including the rapid destruction of red blood cells and anemia. Signs and symptoms include the following:

- Fever and chills.
- Skin rash all over the body with many tiny, flat purple and red spots.
- Nausea or vomiting.
- Joint pain.

If bitten by a brown recluse spider, follow these steps:

- Remain calm. Too much excitement or movement will increase the flow of venom into the blood.
- Immediately contact the RM.
- Try to collect the spider, without being bitten, (even a mangled specimen has diagnostic value), if possible, for positive identification by a spider expert. A plastic bag, small jar, or pill vial is useful and no preservative is necessary, but rubbing alcohol helps to preserve the spider.
- Apply a cool, wet cloth to the bite or cover the bite with a cloth and apply an ice bag to the bite.
- Do not apply a tourniquet. It may cause more harm than benefit.
- Try to positively identify the spider to confirm its type.

A brown recluse bite can be serious and will likely require immediate medical care. Be prepared to describe the spider, where and when the bite took place, and what was being done at the time. Your health professional will ask about the main symptoms, when they began and how they have developed, progressed or changed since the bite. Immediately notify the Response Manager if bitten or stung regardless of the type of insect.

### ***Widow Spiders***

The Northern Black Widow spider may be encountered in Northern Regions of the United States. Other similar widow spiders are the Red Widow and the Brown Widow. Female widow spiders range from 8- 15 mm in body length; males are smaller, sometimes very small (2 mm). Most have globose, shiny abdomens that are predominantly black with red markings (although some may be pale and/or have lateral stripes), with moderately long, slender legs. These spiders are nocturnal and build a three- dimensional tangled web, often with a conical tent of dense silk in a corner where the spider hides during the day. In nature, most species are found under rocks and logs, but they readily adapt to human-altered environments, where they are most commonly found in outbuildings (sheds, barns, privies), water meter holes, nursery cans, and under any item or structure (e.g., barbecue grill, slide, sand box) that has been undisturbed for a lengthy period. Formerly, most bites by black widows (almost all by female spiders) occurred in outhouses, but presently, widow bites occur most frequently when the spider is trapped against human skin, either by reaching under objects/debris where the spider is hiding or when putting on clothing, gloves or

shoes containing the spider. Widow spiders are generally very timid and only bite in self-defense when they accidentally contact humans.



Brown Widow



Red Widow



Black Widow

Bite symptoms are systemic, spreading through the lymphatic system, and usually start about 1 to 3 hours after the bite. The most common symptoms are intense pain, rigid abdominal muscles, muscle cramping, malaise, local sweating, nausea, vomiting and hypertension. Other symptoms may include tremors, labored breathing, restlessness, increased blood pressure and fever. If left untreated, bite symptoms usually last 3 to 5 days.

If bitten, remain calm, and immediately contact the Response Manager. Apply an ice pack directly to the bite area to relieve swelling and pain. Try to collect the spider, without being bitten, (even a mangled specimen has diagnostic value), if possible, for positive identification by a spider expert. A plastic bag, small jar, or pill vial is useful and no preservative is necessary, but rubbing alcohol helps to preserve the spider.

#### **4.3.8.5 Poisonous Vegetation**

Personnel typically allergic to poisonous vegetation shall take extra precautions to avoid contact with the plants to a practical extent and follow the below listed cautions. During activities such as clearing and grubbing may present a challenge, personnel wear additional PPE and use products such as Ivy Block. Poison ivy, poison oak, and poison Sumac are more commonly found in moist areas or along the edge of wooded areas. Shrubs are usually 12 to 30 inches high, or can also be a tree-climbing vine, with triple leaflets and short, smooth hair underneath. These plants contain urushiol, a colorless or pale yellow oil that oozes from any cut or crushed part of the plant, including the roots, stems and leaves and causes allergic skin reactions when contacted. The oil is active year-round. Wear protective clothing that covers exposed skin and clothes. Avoid contact with plants and the outside of protective clothing. If skin contacts a plant, wash the area with soap and water immediately.

Contamination with poison ivy, sumac or oak can happen through several pathways, including:

- Direct skin contact with any part of the plant (even roots once above ground foliage has been removed).
- Contact with clothing that has been contaminated with the oil.
- Contact from removing shoes that have been contaminated (shoes are coated with urushiol oil).
- Sitting in a vehicle that has become contaminated.

- Contact with any objects or tools that have become contaminated.
- Inhalation of particles generated by weed whacking, chipping, vegetation clearing.

If work must be performed on a site with poison ivy, sumac or oak, the following precautions are necessary:

- Decontaminate all tools used in the poison ivy, sumac or oak area: including those used to cut back poison oak, surveying instruments used in the area, air monitoring equipment or other test apparatus before they are placed back into the site vehicle.
- Wear PPE, including Tyvek coveralls, gloves and boot covers. PPE must be placed into plastic bags and sealed prior to placing into the proper receptacle.
- Shower to remove any potential contamination as soon as possible following the work. Any body part with suspected or actual exposure should be washed with “Tecnu” or other product designed for removing urushiol. If you do not have Tecnu wash with cold water. Do not take a bath, as the oils can form an invisible film on top of the water and contaminate your entire body upon exiting the bath. Use Ivy-Block or similar products to prevent poison oak, ivy and sumac contamination.



Poison Sumac



Poison Ivy

## **5 TASK HAZARD ANALYSIS PROCESS**

Task hazard analysis (THA) is a technique used to identify hazards and hazard controls associated with a specific job function. THAs focus on the relationship between the workers, task, and the resources required to complete the task, and the work environment. These variables must be evaluated to identify the potential hazards associated with each task. Once identified, steps can be taken to eliminate, reduce, or control the hazards to an acceptable level of risk. The Preliminary Activity hazard Analysis included below in section 5.1.2 are provided as the basic structure of the hazard analysis based on the known hazards associated with the individuals tasks that were known at the time they were generated. These analyses should be used as an initial guide to help assess the risks and determine the controls of each major project task. On the day of the activity, the Response Manager/Site Safety Officer and the members of the crew shall complete the process by defining the individual steps required to perform the job, the hazards associated with each step, along with the current site-specific conditions to accurately determine the appropriate controls and preventive measures for each hazard identified.

This analysis process conducted with the experienced workers and supervisors as a group helps identify previously undetected hazards and increases the job knowledge of those participating. Safety and health awareness is raised, communication between workers and supervisors is improved, and acceptance of safe work procedures is promoted. Once the activity hazard analysis is completed, generally a rough draft, all personnel involved in the task shall sign the form. These completed AHA's shall be attached to Appendix B of this Site-Specific Health and Safety Plan. After hazards have been systematically identified and controls are developed, the emphasis shifts to methods than can be used to help ensure that all controls stay in place and other hazards do not develop.

### **4.1 Unanticipated Work Activities / Conditions**

Operations on the Deferiet Paper Mill Site may require additional tasks not identified or addressed in this HASP. Before performing any task not covered in this HASP, a THA must be prepared by the Job Forman/supervisor along with the crew personnel that will be involved in the task. The Health and Safety Manger should be notified of any major changes in the scope of work or unanticipated developments that may require an amendment to the Health and Safety Plan.

### **4.2 Preliminary Task Hazard Analysis**

<b>TASK DESCRIPTION:</b> Task 1. Mobilization					
<b>HAZARD ANALYSIS CONDUCTED BY:</b> Marian Murphy				<b>DATE:</b> October 15, 2018	
<b>PHYSICAL HAZARD IDENTIFICATION:</b>					
<input checked="" type="checkbox"/> PHYSICAL EXERTION <input type="checkbox"/> HEAT STRESS <input checked="" type="checkbox"/> COLD STRESS <input type="checkbox"/> HEAVY EQUIPMENT <input checked="" type="checkbox"/> FIRE HAZARDS <input checked="" type="checkbox"/> LIFTING HAZARDS <input checked="" type="checkbox"/> SLIP, TRIP, OR FALL <input checked="" type="checkbox"/> HIGH NOISE ( > 85 dBA ) <input checked="" type="checkbox"/> OVERHEAD UTILITIES <input type="checkbox"/> EXCAVATION/TRENCHING <input type="checkbox"/> CONFINED SPACE <input type="checkbox"/> POISONOUS PLANTS <input type="checkbox"/> POISONOUS/HAZARDOUS ANIMALS <input checked="" type="checkbox"/> ELECTRICAL <input checked="" type="checkbox"/> HAND/POWER TOOLS <input checked="" type="checkbox"/> PUNCTURE/LACERATION <input type="checkbox"/> OXYGEN DEFICIENT <input type="checkbox"/> PRESSURIZED CONTAINERS <input type="checkbox"/> EXPLOSIVE <input type="checkbox"/> VISIBILITY <input checked="" type="checkbox"/> VEHICLE TRAFFIC <input type="checkbox"/> WELDING, CUTTING, BRAZING <input type="checkbox"/> GLARE/LIGHT HAZARDS <input type="checkbox"/> SPLASH <input type="checkbox"/> GRINDING <input type="checkbox"/> FLYING DEBRIS <input checked="" type="checkbox"/> PINCH/GRAB/ROLL <input type="checkbox"/> TEMPERATURE HAZARDS <input type="checkbox"/> OTHER ( SPECIFY ) : _____					
<b>CHEMICAL HAZARD IDENTIFICATION:</b>					
<input type="checkbox"/> CORROSIVE <input type="checkbox"/> VOLATILE <input type="checkbox"/> OXIDIZER <input type="checkbox"/> TOXIC <input type="checkbox"/> RADIOACTIVE <input type="checkbox"/> BIOLOGICAL <input type="checkbox"/> INERT <input type="checkbox"/> REACTIVE <input type="checkbox"/> FLAMMABLE <input type="checkbox"/> COMBUSTIBLE <input type="checkbox"/> NON-HAZARDOUS <input type="checkbox"/> POISON A (GAS) <input type="checkbox"/> OTHER ( SPECIFY ) : _____					
<b>PERSONAL PROTECTIVE EQUIPMENT:</b>					
LEVEL OF PROTECTION	RESPIRATORY PROTECTION	PROTECTIVE CLOTHING	GLOVES	HEAD/FACE/EYE PROTECTION	FOOT PROTECTION
PRIMARY: Level D	None	Proper fitting long pants in good repair; minimum 4" sleeves, Class II high visibility vest	Leather or cotton work-glove.	Hard Hat, Safety Glasses, Hearing Protection,	Steel toe work boot
CONTINGENCY: Modified D	None	Tyvek® Coverall w/Hood	Leather or cotton work-gloves	Hard Hat, Safety Glasses, Hearing Protection,	Steel toe work boot
<b>PPE:</b>	Level D to Modified D		<b>Date:</b>	October 15, 2018	
<b>Hazard Rating:</b>	Moderate		<b>Created by:</b>	David Frost	
<b>HAZARD</b>	<b>SOURCE</b>	<b>SEVERITY</b>	<b>CONTROL MEASURES</b>		
Physical Exertion/Lifting Hazards	Materials / Equipment	Moderate	Use proper lifting techniques and body mechanics such as keeping back straight, using legs to lift, limiting twisting, using mechanical means where possible, and getting help when handling bulky items.		

Electrocution	Overhead/Underground Utilities	Moderate	An investigation shall be conducted upon initial arrival to the Deferiet Paper Mill Site to ensure all access routes are safe from potential overhead hazards. This shall be conducted prior to the delivery of both equipment and materials on-site. In the event of a low hanging line, the local electric company in Deferiet shall be immediately contacted and the transport of equipment will be staged at a safe distance until representatives with the electric company gives assurance that the line in question has been addressed. All power lines shall be treated as live wires until assured safe by the electric company. Equipment shall not deviate from established travel ways or work areas where clearances are unknown/ insufficient. Excavators, large trucks and other similar equipment shall not operate closer than 10 feet from an overhead power line.
Struck By	Vehicle Traffic/ Unloading Equipment and materials.	Moderate	Locate a flat, level, open area clear of overhead utilities and obstructions to unload equipment and materials, always chock wheels. Personnel shall wear class II high visibility vests. Be alert to material and equipment loading/unloading hazards and moving equipment. Use a spotter to aid in unloading and to watch for overhead and backing hazards, and pedestrian/vehicular traffic.
Accidents / crash	Personnel Driving to and from project	Moderate	Personnel shall drive defensively at all times. Learn the safest route to and from job site, leave early to allow sufficient time to arrive safely. Personnel Shall closely follow speed limits travel to and from the Deferiet Paper Mill Site. Contact the GES Health and Safety Manager to report personnel driving dangerously.
Crushed/ Pinch Point	Heavy Equipment	Moderate	All clearances for above and surrounding areas will be checked before operations begin. The use of a ground spotter will be implemented. The ground personnel shall be aware of the equipment's swing radius and pinch points and will stay clear of those areas. A communication system will be developed and instituted between ground personnel and the equipment operator. No personnel will be carried on equipment not equipped with passenger seats.
Cold/Heat Stress	Environment	Moderate	Personnel shall be trained on the signs and symptoms of cold/heat stress. An effective work/rest schedule will be implemented to regulate weather exposures. Fluids will be provided. Employees will be encouraged to refrain from alcohol use after work hours.
Fire/Explosion Hazards	Heavy Equipment	Low	Prior to refueling any equipment, shut off the equipment and allow the engine to cool. Ensure the fueling area is well ventilated. Do not smoke while refueling. Keep open flames and sparks away from area. Know where the fire extinguishers are located. Do not leave equipment unattended while fueling. Equipment will not be positioned in dry vegetation in such a manner that could create a fire.
Shock / Electrocution	Electrical Equipment, Extension cords	Low	All extension cords will be inspected before use for damage and removed from service if damage is found. Ground fault circuit interrupters shall be used on all 110-120-240 circuits

Puncture / Laceration	Pinch Points, Hand Traps, lacerations	Moderate	Proper hand protection will be worn to minimize the possibility of injuries due to cuts and abrasions. Potential pinch points will be identified and marked to avoid injury. Think before placing hands into hazards areas, near moving parts.
Hearing Loss	Loud noises	Low	Use of hearing protection will be worn when employees are exposed to high noise levels (greater than 85 dBA over an 8-hour workday). If you have to raise your voice to speak to your co-worker from a distance of approximately 3 feet away in order to be heard / understood, you should wear hearing protection.
Back Injury	Moving equipment, lifting materials	Moderate	Use proper lifting techniques and body mechanics. Use mechanical equipment where possible. Get plenty of rest. Personnel shall use proper lifting techniques such as keeping back straight, using legs to lift, limiting twisting, using mechanical means where possible, and getting help when handling bulky items.

<b>TASK DESCRIPTION:</b> Task 2. Site Setup					
<b>HAZARD ANALYSIS CONDUCTED BY:</b> Marian Murphy				<b>DATE:</b> October 15, 2018	
<b>PHYSICAL HAZARD IDENTIFICATION:</b>					
<input checked="" type="checkbox"/> PHYSICAL EXERTION <input checked="" type="checkbox"/> FIRE HAZARDS <input checked="" type="checkbox"/> OVERHEAD UTILITIES <input checked="" type="checkbox"/> POISONOUS/HAZARDOUS ANIMALS <input type="checkbox"/> OXYGEN DEFICIENT <input checked="" type="checkbox"/> VEHICLE TRAFFIC <input type="checkbox"/> GRINDING <input type="checkbox"/> OTHER ( SPECIFY ) : _____		<input checked="" type="checkbox"/> HEAT STRESS <input checked="" type="checkbox"/> LIFTING HAZARDS <input type="checkbox"/> EXCAVATION/TRENCHING <input checked="" type="checkbox"/> ELECTRICAL <input type="checkbox"/> PRESSURIZED CONTAINERS <input type="checkbox"/> WELDING, CUTTING, BRAZING <input type="checkbox"/> FLYING DEBRIS		<input checked="" type="checkbox"/> COLD STRESS <input checked="" type="checkbox"/> SLIP, TRIP, OR FALL <input type="checkbox"/> CONFINED SPACE <input checked="" type="checkbox"/> HAND/POWER TOOLS <input type="checkbox"/> EXPLOSIVE <input type="checkbox"/> GLARE/LIGHT HAZARDS <input checked="" type="checkbox"/> PINCH/GRAB/ROLL	
<input type="checkbox"/> HEAVY EQUIPMENT <input type="checkbox"/> HIGH NOISE ( > 85 dBA ) <input checked="" type="checkbox"/> POISONOUS PLANTS <input checked="" type="checkbox"/> PUNCTURE/LACERATION <input type="checkbox"/> VISIBILITY <input type="checkbox"/> SPLASH <input checked="" type="checkbox"/> TEMPERATURE HAZARDS					
<b>CHEMICAL HAZARD IDENTIFICATION:</b>					
<input type="checkbox"/> CORROSIVE <input type="checkbox"/> RADIOACTIVE <input type="checkbox"/> FLAMMABLE <input type="checkbox"/> OTHER ( SPECIFY ) : _____		<input type="checkbox"/> VOLATILE <input type="checkbox"/> BIOLOGICAL <input type="checkbox"/> COMBUSTIBLE		<input type="checkbox"/> OXIDIZER <input type="checkbox"/> INERT <input type="checkbox"/> NON-HAZARDOUS	
<input type="checkbox"/> TOXIC <input type="checkbox"/> REACTIVE <input type="checkbox"/> POISON A (GAS)					
<b>PERSONAL PROTECTIVE EQUIPMENT:</b>					
LEVEL OF PROTECTION	RESPIRATORY PROTECTION	PROTECTIVE CLOTHING	GLOVES	HEAD/FACE/EYE PROTECTION	FOOT PROTECTION
PRIMARY: Level D	None	Appropriate work attire, full length pants in good repair, minimum 4" sleeves. High visibility Class II vest	Leather Work Gloves	Hard Hat and Safety Glasses	Steel toe rubber boots
CONTINGENCY: Modified D	Dust Mask	Tyvek® (all seams must be taped/sealed)	Nitrile inner, Leather outer gloves	Hard Hat, Safety Glasses, Hearing Protection if noise hazard present.	Steel toe rubber boots/booties with taped seams.

<b>PPE:</b>	Level D to Modified D	<b>Date:</b>	October 15, 2018
<b>Hazard Rating:</b>	Moderate	<b>Created by:</b>	Marian Murphy
<b>HAZARD</b>	<b>SOURCE</b>	<b>SEVERITY</b>	<b>CONTROL MEASURES</b>
Shock / electrocution	Utilities – overhead	Moderate	Identify all on-site utilities prior to any site activities.
Physical Exertion/Lifting Hazards	Materials / Equipment	Moderate	Use proper lifting techniques and body mechanics such as keeping back straight, using legs to lift, limiting twisting, using mechanical means where possible, and getting help when handling bulky items.
Heat / Cold Stress	Seasonal temperatures / Personal protective equipment	Moderate	Personnel shall be trained on the signs and symptoms of heat / cold stress. An effective work/rest schedule will be implemented to regulate weather exposures. Fluids will be provided. Employees will be encouraged to refrain from alcohol use after work hours. The buddy system will be closely followed and personnel will monitor each other for the signs and symptoms of heat / cold stress.
Puncture / Laceration	Hand Tools, Pinch Points, Hand Traps	Moderate	Proper hand protection will be worn to minimize the possibility of injuries due to cuts and abrasions. Always use the right tool for the right job, inspect all tools and equipment prior to beginning task. Potential pinch points will be identified and marked to avoid injury. Think before placing hands into hazards areas, near moving parts.
Slips, trips, Falls	Site terrain	Moderate	A thorough hazard assessment will be conducted to identify any concerns and hazards onsite and will be continued thereafter proactively. Personnel will use caution while walking on-site and maintain awareness of changes in elevation, and holes. Proper housekeeping procedures should be followed at all times.
Hearing Loss	Loud noises	Low	Use of hearing protection will be worn when employees are exposed to high noise levels (greater than 85 dBA over an 8-hour workday). If you have to raise your voice to speak to your co-worker from a distance of approximately 3 feet away in order to be heard / understood, you should wear hearing protection.

<b>PPE:</b>	Level D to Modified D	<b>Date:</b>	October 15, 2018
<b>Hazard Rating:</b>	Moderate	<b>Created by:</b>	Marian Murphy
<b>HAZARD</b>	<b>SOURCE</b>	<b>SEVERITY</b>	<b>CONTROL MEASURES</b>
Tick bites, stings, rash	Ticks, biting insects, poisonous vegetation	High	<p>During the initial site walk team members encountered numerous ticks. Personnel should maintain a high level of awareness and conduct inspections of clothing and work areas. Due to the heavy infestation of ticks on the Deferiet Paper Mill Site, team members will be treating their clothes with a concentration of Permethrin to prevent ticks from remaining on your clothing or person.</p> <p>Wasps/hornets/bees and other stinging insects encountered on site present a serious hazard to those workers who are allergic. Employees whom are allergic should notify the Response Manager/co-workers prior to starting operations and make known the degree of allergic reactions experienced in the past, and inform others of the location of medicine/shots that need to be taken in the event of being stung. Wear light-colored clothing, including long-sleeved shirts and long pants tucked into boots or socks.</p> <p>Use insect repellents that provide protection for the amount of time you will be outdoors. If clothes treated with Permethrin start to lose their effectiveness, retreat clothing. Check your skin and clothes for ticks every day. The immature forms of these ticks are very small and may be hard to see. Remember to check your hair, underarms, and groin for ticks.</p> <p>In the event of a tick bite, Immediately remove ticks from your body using fine-tipped tweezers. Grasp the tick firmly and as close to your skin as possible. Pull the tick's body away from your skin with a steady motion. Clean the area with soap and water and continue to monitor the employee watching for allergic reaction; contact a doctor immediately if a reaction develops or 911 if the reaction is severe. <b><u>Be sure to report any bite, sting, or any injury to the Response Manager/SSO, no matter how minor or insignificant the injury/bite may seem.</u></b></p> <p>Removing infected ticks within 24 hours reduces your risk of being infected with the Lyme disease bacterium.</p>

<b>TASK DESCRIPTION:</b> Task 3. Encapsulate asbestos					
<b>HAZARD ANALYSIS CONDUCTED BY:</b> Marian Murphy				<b>DATE:</b> October 15, 2018	
<b>PHYSICAL HAZARD IDENTIFICATION:</b>					
<input checked="" type="checkbox"/> PHYSICAL EXERTION	<input checked="" type="checkbox"/> HEAT STRESS	<input checked="" type="checkbox"/> COLD STRESS	<input type="checkbox"/> HEAVY EQUIPMENT		
<input checked="" type="checkbox"/> FIRE HAZARDS	<input checked="" type="checkbox"/> LIFTING HAZARDS	<input checked="" type="checkbox"/> SLIP, TRIP, OR FALL	<input checked="" type="checkbox"/> HIGH NOISE (> 85 dBA)		
<input type="checkbox"/> OVERHEAD UTILITIES	<input type="checkbox"/> EXCAVATION/TRENCHING	<input type="checkbox"/> CONFINED SPACE	<input type="checkbox"/> POISONOUS PLANTS		
<input type="checkbox"/> POISONOUS/HAZARDOUS ANIMALS	<input type="checkbox"/> ELECTRICAL	<input checked="" type="checkbox"/> HAND/POWER TOOLS	<input checked="" type="checkbox"/> PUNCTURE/LACERATION		
<input type="checkbox"/> OXYGEN DEFICIENT	<input type="checkbox"/> PRESSURIZED CONTAINERS	<input type="checkbox"/> EXPLOSIVE	<input type="checkbox"/> VISIBILITY		
<input checked="" type="checkbox"/> VEHICLE TRAFFIC	<input type="checkbox"/> WELDING, CUTTING, BRAZING	<input type="checkbox"/> GLARE/LIGHT HAZARDS	<input checked="" type="checkbox"/> SPLASH		
<input type="checkbox"/> GRINDING	<input checked="" type="checkbox"/> FLYING DEBRIS	<input checked="" type="checkbox"/> PINCH/GRAB/ROLL	<input checked="" type="checkbox"/> TEMPERATURE HAZARDS		
<input type="checkbox"/> OTHER (SPECIFY):					
<b>CHEMICAL HAZARD IDENTIFICATION:</b>					
<input type="checkbox"/> CORROSIVE	<input type="checkbox"/> VOLATILE	<input type="checkbox"/> OXIDIZER	<input type="checkbox"/> TOXIC		
<input type="checkbox"/> RADIOACTIVE	<input type="checkbox"/> BIOLOGICAL	<input type="checkbox"/> INERT	<input type="checkbox"/> REACTIVE		
<input type="checkbox"/> FLAMMABLE	<input type="checkbox"/> COMBUSTIBLE	<input checked="" type="checkbox"/> NON-HAZARDOUS	<input type="checkbox"/> POISON A (GAS)		
<input type="checkbox"/> OTHER (SPECIFY):					
<b>PERSONAL PROTECTIVE EQUIPMENT:</b>					
LEVEL OF PROTECTION	RESPIRATORY PROTECTION	PROTECTIVE CLOTHING	GLOVES	HEAD/FACE/EYE PROTECTION	FOOT PROTECTION
PRIMARY: Level C	Full-face respirator or Half face with GMC P-100 HEPA cartridge	Tyvek coveralls (all seams must be taped/sealed)	Nitrile inner, Nitrile outer gloves	Hard Hat, Hearing Protection if noise hazard present.	Steel toe work boot, w/ disposable latex covers with taped seams
CONTINGENCY: Level C	Full-face respirator or Half Face with GMC P-100 HEPA cartridge	Splash resistant coveralls (all seams must be taped/sealed)	Nitrile inner, Nitrile outer gloves	Hard Hat, Hearing Protection if noise hazard present.	Steel toe work boot, w/ disposable latex covers with taped seams

<b>PPE:</b>	Level C	<b>Date:</b>	October 15, 2018
<b>Hazard Rating:</b>	Moderate	<b>Created by:</b>	Marian Murphy
<b>HAZARD</b>	<b>SOURCE</b>	<b>SEVERITY</b>	<b>CONTROL MEASURES</b>
Atmospheric Hazards	Asbestos	Moderate	Air monitoring will be conducted to determine employee exposure levels and monitor the effectiveness of engineering and administrative control measures. Engineering controls will be employed to control the generation of airborne vapors during container moving activities. A (dust monitor will be used to monitor the air during these activities.
Crash / Injury	Unauthorized personnel in work area	Moderate	Personnel should remain diligent in looking out for the possibility of alerting equipment operators, drivers and the crew in general to stop work if unauthorized personnel are observed to travel near work areas that may pose a hazard. EVERYONE has the ability and the responsibility to STOP WORK if a dangerous situation is perceived.
Struck by materials / equipment	Loading of material	Moderate	At no time will any load be swung above or suspended above any ground personnel. The use of a ground spotter will be implemented when necessary, however the area shall be clear of personnel during loading activities. Controls shall be in place to ensure ground personnel do not enter hazardous areas during loading operations. Personnel shall wear class II high visibility vest at all times.
Hearing Loss	Loud noises	Low	Use of hearing protection will be worn when employees are exposed to high noise levels (greater than 85 dBA over an 8-hour workday). If you have to raise your voice to speak to your co-worker from a distance of approximately 3 feet away in order to be heard / understood, you should wear hearing protection.
Tip over	Uneven terrain / soft spots	Low	Utilize spotter for correct positioning of equipment/trucks prior to loading operations. Inspect loading and staging areas for unsafe conditions, soft spots, and changes in elevation prior to loading/unloading. Ensure loads are evenly distributed.
Slip / Trips / Fall Hazards	Debris, changes in elevation, holes, Site Terrain	Moderate	Personnel shall take extra precautions around excavation activities and conduct hazard assessments of work areas and travel paths, maintaining awareness of holes, and changes in elevation. All excavation areas should be fenced off. If a hazard cannot be immediately addressed it should be flagged with a ribbon or yellow construction/caution tape to identify the hazard.
Fire / Explosive cond.	Improper refueling procedures	Low	Prior to refueling any equipment shut off the engine and allow to cool. Ensure the fueling area is well ventilated. Do not smoke while refueling. Keep open flames and sparks away from area. Know where the fire extinguishers are located. Do not leave equipment unattended while fueling. Use electric fork lifts and man lifts.

<b>PPE:</b>	Level C	<b>Date:</b>	October 15, 2018
<b>Hazard Rating:</b>	Moderate	<b>Created by:</b>	Marian Murphy
<b>HAZARD</b>	<b>SOURCE</b>	<b>SEVERITY</b>	<b>CONTROL MEASURES</b>
Cold / Heat Stress	Seasonal temperatures / high levels of PPE	Low	Personnel shall be trained on the signs and symptoms of cold/heat stress. An effective work/rest schedule will be implemented to regulate weather exposures. Fluids will be provided. Employees will be encouraged to refrain from alcohol use after work hours.
Physical Exertion / Back Injury	Moving equipment, lifting materials	Moderate	Use proper lifting techniques and body mechanics. Use mechanical equipment where possible. Get plenty of rest. Personnel shall use proper lifting techniques such as keeping back straight, using legs to lift, limiting twisting, using mechanical means where possible, and getting help when handling bulky items.
Splash	Splash spraying encaosulant.	Low	Splash resistant coveralls (Saranex) , with taped seams, inner and outer taped gloves, chemical resistant boots and full face respirators must be worn when handling all sludge.
Release of stored energy, electrocution	Lock-out Tag-out	Moderate	Prior to performing maintenance or repairs on any equipment, all residual or stored energy must be properly bled off. Once this is accomplished, LOTO controls will be implemented to prevent inadvertent startup of the equipment during maintenance activities

<b>TASK DESCRIPTION:</b> Task 4. Project Closeout / Demobilization			
<b>HAZARD ANALYSIS CONDUCTED BY:</b> Marian Murphy		<b>DATE:</b> October 15, 2018	
<b>PHYSICAL HAZARD IDENTIFICATION:</b>			
<input checked="" type="checkbox"/> PHYSICAL EXERTION <input type="checkbox"/> FIRE HAZARDS <input checked="" type="checkbox"/> OVERHEAD UTILITIES <input type="checkbox"/> POISONOUS/HAZARDOUS ANIMALS <input type="checkbox"/> OXYGEN DEFICIENT <input checked="" type="checkbox"/> VEHICLE TRAFFIC <input type="checkbox"/> GRINDING <input type="checkbox"/> OTHER ( SPECIFY ) : _____	<input checked="" type="checkbox"/> HEAT STRESS <input checked="" type="checkbox"/> LIFTING HAZARDS <input type="checkbox"/> EXCAVATION <input type="checkbox"/> ELECTRICAL <input type="checkbox"/> PRESSURIZED CONTAINERS <input type="checkbox"/> WELDING, CUTTING, BRAZING <input type="checkbox"/> FLYING DEBRIS	<input checked="" type="checkbox"/> COLD STRESS <input checked="" type="checkbox"/> SLIP, TRIP, OR FALL <input type="checkbox"/> CONFINED SPACE <input checked="" type="checkbox"/> HAND/POWER TOOLS <input type="checkbox"/> EXPLOSIVE <input type="checkbox"/> GLARE/LIGHT HAZARDS <input checked="" type="checkbox"/> PINCH/GRAB/ROLL	<input type="checkbox"/> HEAVY EQUIPMENT <input type="checkbox"/> HIGH NOISE ( > 85 DBA ) <input type="checkbox"/> POISONOUS PLANTS <input checked="" type="checkbox"/> PUNCTURE/LACERATION <input type="checkbox"/> VISIBILITY <input type="checkbox"/> SPLASH <input type="checkbox"/> TEMPERATURE HAZARDS
<b>CHEMICAL HAZARD IDENTIFICATION:</b>			
<input type="checkbox"/> CORROSIVE <input type="checkbox"/> RADIOACTIVE	<input type="checkbox"/> VOLATILE <input type="checkbox"/> BIOLOGICAL	<input type="checkbox"/> OXIDIZER <input type="checkbox"/> INERT	<input type="checkbox"/> TOXIC <input type="checkbox"/> REACTIVE



## **5 AIR MONITORING**

Air monitoring will be conducted on the Deferiet Paper Mill Site to monitor any fugitive dust and or air-borne asbestos in and around the work area. Personal air monitoring will also be implemented to monitor any potential exposure to employees working directly with asbestos piping while spraying encapsulant. The air monitoring strategy that will be implemented is discussed in greater detail in the following sections.

Engineering controls will be employed to control the generation of airborne dust during the planned work activities. All work areas shall be adequately wetted as necessary to control emissions. The observation of airborne dust in the work area will be used as an action level to increase dust suppression methods.

### **5.2 Personal Air Sampling**

Personal air sampling will be conducted in order to determine the airborne concentration of asbestos and calculate employee exposure levels. Personal air sampling will be conducted over a full work shift at the highest exposure level for each job classification in each work area. These samples will represent the monitored employee's regular daily exposure to asbestos. The employees working closest to a source of contamination have the highest likelihood of exposure to airborne contaminants and therefore will be selectively monitored during excavation test pitting operations. All monitoring activities to determine personnel exposure will be conducted in the breathing zone outside the respirator face piece (within 12 inches) in accordance with NIOSH/OSHA approved methods.

Personal air monitoring for asbestos will be conducted using a GilAir-5 portable air sampling pump (or similar). Samples will be collected to gauge employee exposures of airborne fiber concentrations. The sampling pump flow rates will be 2 liters per minute using a 0.8-micron pore size, 25-millimeter mixed cellulose ester (MCE) filter cassette. Persons sampled, tasks performed, duration, volumes and laboratory results will be reported. The sampling protocols established in NIOSH will be followed. The personal air pumps will be pre- and post-calibrated. Pump calibration, operation, and maintenance will be conducted in accordance with the manufacturer's instructions. If there is a change of equipment, process, control, or a new task has been initiated that may potentially result in an employee being exposed at or above the action level, additional air monitoring shall be conducted. Should the sample results indicate exposures over the OSHA permissible exposure limits and site-specific action levels, engineering controls will be adjusted, and an additional air sampling event will be conducted. Engineering controls will be employed to control the generation of airborne dust during the planned work activities. All work areas shall be adequately wetted as necessary to control emissions. The observation of airborne dust in the work area will be used as an action level to increase dust suppression methods.

Once the sample is analyzed, the results will be used to calculate the average level of exposure during the complete work shift (TWA). Personal air samples collected will be submitted to an American Industrial Hygiene Association (AIHA) accredited laboratory for analysis using National Institute for Occupational Safety and Health (NIOSH) method 7400 Phase Contrast Microscopy (PCM) methodology.

### **5.3 Perimeter Air Monitoring**

Perimeter air monitoring will be conducted to ensure that offsite migration of fugitive emissions created during planned work activities do not adversely affect the surrounding community. The below perimeter air monitoring strategy is subject to change based upon the EPA's air monitoring selected methodology.

Perimeter monitoring will be accomplished using a field-portable monitor units.

#### **Asbestos Action Level**

Due to the inability to quantify the concentration of ACM on-site to any degree of certainty, the exposure potential cannot be adequately determined by an initial exposure assessment. For this reason, Level C protection levels will be maintained throughout all site encapsulation operations. Should the sample results indicate exposures over the OSHA permissible exposure limits and Site-specific action levels, engineering controls will be adjusted.

- The OSHA Permissible Exposure Limit (PEL) for Asbestos is 0.1 f/cc (fibers per cubic centimeter of air).

#### **5.3.1 Reasons to Upgrade**

- Known or suspected presence of dermal hazards.
- Occurrence or likely occurrence of gas, vapor or dust emission.
- Change in work task that will increase the exposure or potential exposure to hazardous materials.

#### **5.3.2 Reasons to Downgrade**

- New information indicating that the situation is less hazardous than was originally suspected.
- Change in site conditions that decrease the potential hazard
- Change in work task that will reduce exposure to hazardous materials.

### **5.4 AIR MONITORING EQUIPMENT**

#### **5.4.1 Monitoring Equipment & Descriptions**

##### **5.4.1.1 Calibration:**

All monitors that are in use are and will be calibrated in accordance with the manufacturer recommendations. All calibrations will be documented in accordance with the GES Air Monitoring Procedures. The monitors will be calibrated, bump tested and operated by qualified individuals.

##### **5.4.1.2 Instruments**

Instruments which will be used on site may be one or more of the following.

INSTRUMENT TYPE	EQUIPMENT MANUFACTURER	TARGET COMPOUNDS
Air Sampling Pump	Gillian GilAir-5	Asbestos
Particle Monitor	Thermo pDR-1000AN DataRam (or similar)	Dust

## 6 SITE CONTROL

To prevent migration of contamination from personnel and equipment, work areas will be clearly specified as designated below prior to beginning operations. Each work area will be clearly identified using signs or physical barriers surrounding the excavation area.

- Exclusion Zone (Red tape or physical barricade with signage)
- Contamination Reduction Zone (Yellow tape or physical barricade with signage)
- Support Zone (Proper signage designating the hazards and contact information.)

A log of all personnel visiting, entering or working on the site shall be maintained by the site SSO. A separate log will be kept in the CRZ near the entrance to the EZ / which personnel shall sign in and out of the exclusion zone. No visitor will be allowed in the EZ without showing proof of training and medical certification, per 29 CFR 1910.120(e), (f). Visitors will attend a site orientation given by the SSO and sign the site- specific HASP.

### 6.2 SUPPORT ZONE

The support zone will be located in an area that has been determined contamination free or “clean” by supporting analytical data or other objective criteria. Site break areas, toilet facilities, administrative, and other support functions will take place in this zone. Contaminated PPE and/or equipment are prohibited in this area.

### 6.3 CONTAMINATION REDUCTION ZONE

The contamination reduction zone (CRZ) is the area between the exclusion zone and support zone designated for equipment and personnel decontamination. The CRZ may also be a staging area for site tools, emergency equipment, containment equipment, additional PPE, sampling equipment, and cartridge changes. All personnel and/ or equipment exiting the exclusion zone must enter the CRZ for decontamination before entering the support zone. PPE dress outs must be accomplished in the support zone before entry into the CRZ. Contaminated PPE will remain in the CRZ or the exclusion zone until properly disposed. The location of the CRZ will be determined mainly by the distance needed to prevent a potential release, explosion, or other hazard in the exclusion zone from affecting personnel in the CRZ and support zone. Additional toilet and hand

washing facilities may be located in this area. No eating, drinking, chewing of tobacco or gum, smoking or applying makeup (lip balm, sun screen, etc....) is allowed in this area.

#### **6.4 EXCLUSION ZONE**

Only authorized personnel that meet all the requirements as stated in Section 1.0 “Introduction and Site Entry Requirements” of this HASP and other applicable requirements of 29 CFR 1910.120 are allowed entrance. The exclusion zone will be well delineated by means of barricades, caution tape, fencing, or other highly visible and physical barriers.

#### **6.5 BUDDY SYSTEM**

The Buddy System shall be used for all entries into the exclusion zone. This is a system of organizing employees into work teams in such a manner that each team member can observe the activities of each other. Thus, in case of an emergency, the entire team can account for the location and activity of each team member. All personnel will be instructed to look for and inform each other of any changes in their physical or mental condition during the performance of all field activities.

#### **6.6 VISITORS**

All visitors entering the CRZ or EZ must provide all required training and medical monitoring documentation before arrival on-site, if possible. The OSC/Response Manager must approve the site visit and insure visitors have the appropriate personal protective equipment. A safe route shall be established through the site and a safe distance from on-going operations. Visitors will always be escorted in the CRZ or EZ. The Response Manager, Dan Kowalski, will issue visitors a film badge when necessary for any site visit where the EZ or CRZ is entered. All visitors shall wear:

- Safety-Toe Shoes or Safety-Toe work Boots
- Hard Hat
- Safety Glasses
- White Protective Coveralls (If required)
- Film Badge (if necessary)

#### **6.7 SITE MAPS**

Site maps depicting the work areas, contaminated areas, EZ, CRZ, support zone, command post, and the primary and contingency assembly areas will be developed and posted on site prior to work. The map will include designated work areas, escape routes, emergency assembly areas (primary and contingency), and hazardous and utility layouts. Additionally, a map depicting the hospital driving route (included as an attachment to this SSHSP) will also be posted at the site (copies in site vehicles) and reviewed with personnel during the site orientation.

#### **6.8 SITE COMMUNICATION**

Site communications on the Deferiet Paper Mill Site will be conducted via cell phones. To be effective, all communication commands must be prearranged, and all signals recognized by all on-site personnel in advance. As a contingency measure, air horns will be used to alert all on-site personnel to potential emergencies. The below communication commands / signals will be

discussed during site orientation and reinforced occasionally during safety meetings to ensure site personnel are familiar with the prearranged signals. The prearranged air horn signals are as follows:

- 1 Blast - Attention, Contact command post.
- 2 Blasts - Emergency, Assemble at decontamination line.
- 3 Blasts - General Emergency, Evacuate site immediately and meet at the designated assembly area.

## **6.9 SITE INSPECTIONS**

Site safety inspections will be conducted daily. All formal inspections will be conducted at least weekly and documentation kept on job file for review by the Health and Safety Manager.

## **6.10 TRAFFIC CONTROL**

The RM/ SSO shall ensure that traffic patterns and roadways are designed and operated in a manner that minimizes the potential for vehicle related accidents. The RM shall ensure that the area is adequately delineated and barricaded to prevent unauthorized personnel and vehicles at a safe distance from the work area. Key elements that will be considered and reviewed include:

- Minimize the potential for operating vehicles in reverse (i.e., backing)
- Use cones and flaggers when necessary to warn traffic of work.
- Avoid head-on traffic patterns. Where practical, establish traffic patterns that are circular.
- Minimize intersections when creating traffic plans.
- If traffic pattern is not obvious, post directional signs to reduce potential of turns into unapproved/unsafe areas.
- Avoid areas with overhead obstructions.
- Where overhead obstructions cannot be avoided, post warning signs and/ or construct warning devices.
- Instruct all drivers on proper procedures and speed limits.

## **7 DECONTAMINATION**

The decontamination process is designed to remove any contamination acquired in the exclusion zone and to keep the spread of contaminated materials from entering the support area. Care must be exercised to ensure that contaminants are removed from personnel and equipment before the personnel or equipment leaving the site.

### **7.2 PERSONNEL DECONTAMINATION**

The method of decontamination which will be utilized on the Deferiet Paper Mill Site will be the orderly and controlled removal of contaminated layers of personal protective clothing and disposing in proper containers. The RM/SSO will ensure that all site personnel are familiar with personnel decontamination procedures as listed below. All personnel wearing PPE in a work area (EZ) must undergo decontamination prior to entering the SZ. Personnel will perform the following

decontamination procedures which consist of a standard of procedures performed in a specific sequence:

- The first station of the decontamination line will consist of personnel dropping any tools or equipment for later decontamination on provided table or poly sheeting.
- Disposable boot covers, and outer gloves will be removed and placed in proper containment.
- The Tyvek coveralls will then be removed using slow, sure movements, gently rolling the coveralls down as they are removed. Rolling the coveralls while removing them keeps the contaminant covered side in as it is tightly rolled all the way down to the ankles and removed. The rolled-up garment can then be placed directly into the labeled PPE containment drum, followed by the removal of the inner gloves.
- Respirators will be removed last.
- Personnel will then thoroughly shower in the decontamination trailer in the CRZ.
- Disposable protective clothing must be discarded and disposed of properly. All used protective clothing shall be deposited in labeled containers or impermeable bags for proper disposal.

### **7.3 EQUIPMENT DECONTAMINATION**

The decontamination process is designed to remove any contamination acquired in the EZ and to keep the spread of contaminated materials from entering the support area. Care must be exercised to ensure that contaminants are removed from all equipment before leaving the site. All equipment and tools that have been contaminated shall be decontaminated prior to leaving the area. If the level of vehicle contamination is low, decontamination may be limited to rinsing tires and wheel wells with an appropriate detergent and water. All wastewater generated during decontamination will be collected for disposal.

### **7.4 SANITARY FACILITIES AND LIGHTING REQUIREMENTS**

Appropriate sanitary facilities will be provided along with hand wash stations on the Deferiet Paper Mill Site. The requirements for sanitary facilities on site will meet all applicable standards found in CFR 29 1910.120 (n) (3) and the GES operating procedure.

### **7.5 HYGIENE**

The requirements for sanitary facilities on site will meet all applicable standards found in CFR 29 1910.120 (n) (3) and GES operating procedure. One sanitary facility shall be provided for every 15 employees.

## **8 EMERGENCY CONTINGENCY PLAN**

Emergency response to potential dangers will be discussed with all personnel prior to beginning planned work activities on the Deferiet Paper Mill Site. The RM/SSO shall assign individual team members roles and responsibilities to carry out in the event of an emergency. All team members shall participate in the initial Site-specific emergency response planning and discussion to ensure full understanding of procedures, emergency assembly areas (primary and contingency), personal roles and responsibilities, Site communications, location of emergency equipment / First aid / eye wash stations.

## **8.2 ACTIVATION**

The contingency plan may be activated by any of the following conditions:

1. An injury requiring off-site response occurs.
2. Someone observes the development of an IDLH situation.
3. There is a weather-related emergency.
4. There is a major release, explosion, or fire.

## **8.3 EMERGENCY COMMUNICATIONS**

Site communications on the Deferiet Paper Mill Site will be conducted via cell phones. As a contingency measure, air horns will be used to alert all on-site personnel to potential emergencies. The below communication commands / signals will be discussed during site orientation and reinforced occasionally during safety meetings to ensure site personnel are familiar with the prearranged signals. The prearranged air horn signals are as follows:

- 1 Blast - Attention, Contact command post.
- 2 Blasts - Emergency, Assemble at decontamination line.
- 3 Blasts - General Emergency, evacuate site immediately and meet at the designated assembly area.

## **8.4 EVACUATION ROUTES AND ASSEMBLY AREAS**

The designated assembly area and emergency evacuation routes is identified on the site map and posted in the office trailer and other strategic locations as necessary. All personnel on site will be briefed on these and all emergency procedures as part of the initial safety briefing.

## **8.5 EMERGENCY PROCEDURES**

### **8.5.1 CRZ or EZ Injury**

Operations will cease, and area will be cleared for emergency personnel. A designated decontamination team will decontaminate to the extent possible before arrival of off-site responders and movement to the support zone. If the condition is serious, a partial decontamination will be completed if possible. First aid will be administered until professional medical assistance arrives. If movement will aggravate the injury, the injured personnel will be left in place. If the injured personnel are at a greater risk inside the exclusion zone or emergency personnel are not able to enter the zone, then movement of the injured personnel becomes unavoidable. Care will be exercised to prevent spread of contamination. A copy of the suspected contaminants is to be provided to the responding medical team for transport back to the hospital. Rescue of downed personnel where the reason of that occurrence is not known should be performed in the next higher level of PPE.

### **8.5.2 Support Zone Injury**

The Response Manager / Site Safety Officer will assess the nature of the injury. If injury does not affect performance of personnel, operations may continue. If injury increases risk to others, operations will cease, until risk is removed or minimized.

### **8.5.3 PPE Failure**

In the event of PPE failure or alteration, that person and their designated buddy will immediately leave the EZ and assemble at the decontamination line. Re-entry will not be permitted until the equipment has been repaired or replaced.

### **8.5.4 Other Equipment Failure**

In the event of equipment failure other than PPE, the RM/SSO shall determine if the problem affects the safety of personnel or prevents the safe completion of the tasks. If so, the operation may cease until repairs/replacements are made and the risk to safety is removed.

### **8.5.5 Fire or Explosion**

Fire and Explosion Hazards are anticipated to be a concern during the planned work activities on the Deferiet Paper Mill Site. Adequate multi-purpose (A, B, C) fire extinguishers (20lbs) will always be located onsite at each major project task. The local Fire Department in Deferiet New York (Deferiet Fire Department) area will be notified by the Response Manager of the planned work activities to allow the FD to conduct preplanning as necessary to provide a timelier response in the event of an emergency. In the event of a fire not involving or in the immediate vicinity of hazardous materials, the RM/SSO will determine if the fire can be suppressed. If the fire is small and can be safely addressed, a team of properly trained personnel will secure the situation. If the event is uncontrollable; involving volatile flammable liquids, or in the immediate vicinity of, all personnel will be immediately evacuated to the predetermined upwind emergency assembly area and the Deferiet Fire Department will be 315-493-4039.

Emergency response to potential dangers, such as fires and spills will be discussed with all personnel prior to beginning planned work activities on the Deferiet Paper Mill Site. The RM/SSO shall assign individual team members roles and responsibilities to carry out in the event of an emergency. All team members shall participate in the initial Site-specific emergency response planning and discussion to ensure full understanding of procedures, emergency assembly areas (primary and contingency), equipment, and personal responsibilities. GES personnel may assist firefighters if required as well as all emergency responders, with information related to the incident. All fires, regardless of size, must be immediately reported. If the event is off-site, employees shall be alerted to the situation and assemble at the decontamination line, or the designated assembly area. A decision will be made as to stopping the work and evacuating or continuing work with a heightened awareness. In any case, if the incident is rapidly progressing and the site is downwind or otherwise in the path of the fire, the site shall be evacuated immediately.

### **8.5.6 Spill, Leak or Release**

If the event is on site, operations will cease, and a designated suppression team will assemble upwind of the event. All non-essential personnel in the area will meet at the decontamination line or the designated assembly area depending on the alarm given. The RM/SSO will attempt to determine the nature and extent of the release by air monitoring readings. The RM/SSO will direct the suppression crew in making the necessary attempts to stop the release and initiate clean-up operations. Operations will remain suspended until the incident is stabilized and no longer poses a threat to personnel

## **8.6 POST EMERGENCY**

Anytime the emergency contingency plan is activated, the incident must be critiqued to assure proper procedures were followed, corrective action plans have been established and site operations are safe to restart work. The post incident review committee shall consist of no less than the following members:

- EPA On-Scene Coordinator Joel Petty
- Response Manager Kevin Shaver
- Health and Safety Manager David Frost
- Regional Management
- Others as necessary

The review shall take place either in person or via conference call within five (5) days of the event. This is to allow time to assure all investigations are as complete as possible and written reports submitted. The review should take place before the activity which triggered the activation is restarted to assure all measures are in place to prevent, or reduce the potential of, recurrence.

## **8.7 EMERGENCY EQUIPMENT**

The following equipment will be located on the job site:

- First Aid Kit (Office Trailer and company vehicles)
- Emergency Eyewash (capable of providing a minimum 15 minutes of 0.4 gallons/minute)
- ABC Fire Extinguishers located at:
  - Decontamination Area (minimum 10-pound ABC)
  - Surrounding the Excavation (minimum 20-pound ABC)
  - Each Piece of Equipment (including company vehicles.) Minimum 5 Pound on equipment; 2 ½ pound company trucks.
- Chemical Sorbents Pads
- Portable Air Horns

## **8.8 EMERGENCY TELEPHONE NUMBERS**

CHEMTREC	800-424-9300
National Response Center	800-424-8802
National Poison Control Center	800-362-9922
Federal Emergency Management Agency	202-646-2400
Centers for Disease Control	800-232-4636
Poison Control Center	800-222-1222

### Emergency Services

Emergency Fire	911
Emergency Police	911
Emergency Medical Services (EMS)	911

### US Environmental Protection Agency

US EPA On-Scene Coordinator Joel Petty	732-321-4388
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GES

GES Environmental Services, Inc.	800-548-6938
GES Response Manager Jay Robertson	302-229-4754
GES Health & Safety David Frost	302-683-4620

Local Non-Emergency Numbers

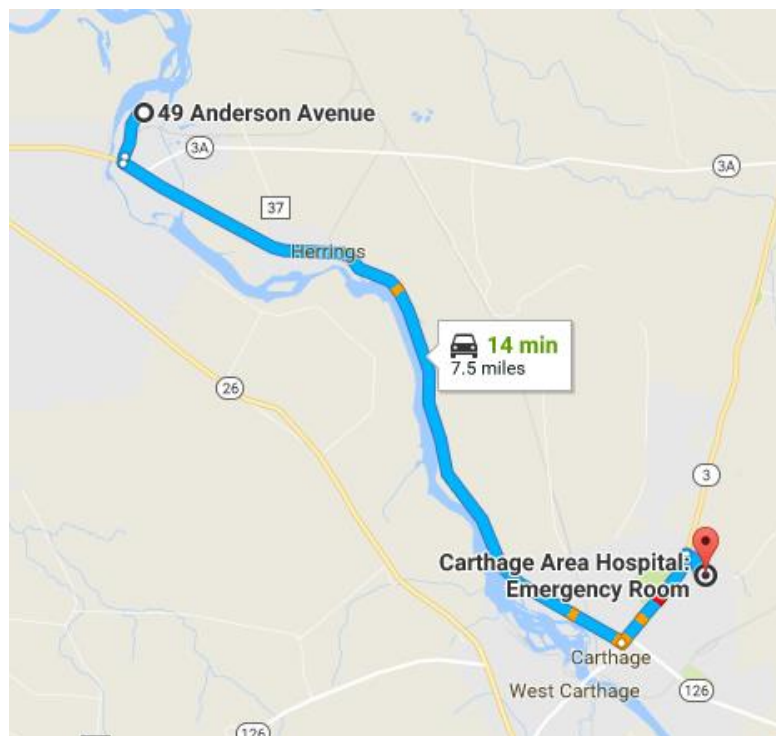
Carthage Police Department	315-493-1141
Deferiet Fire Department	315-493-4039
Jefferson County Sheriff's Department	315-786-2700
Carthage Village Public Works Department	315-493-2210

**(\*) Hospital: Carthage Area Hospital** 315-493-1000  
1001 West St.  
Carthage, New York, 13619

The above emergency agencies shall be contacted and notified on the specific hazards on this project. Coordination for special emergency response requirements with these agencies shall be completed upon arrival.

**8.9 CARTHAGE AREA HOSPITAL DIRECTIONS**

The Carthage Area Hospital is located at 1001 West Street, Carthage, New York 13619 and the non-emergency contact number is: 315-493-1000.



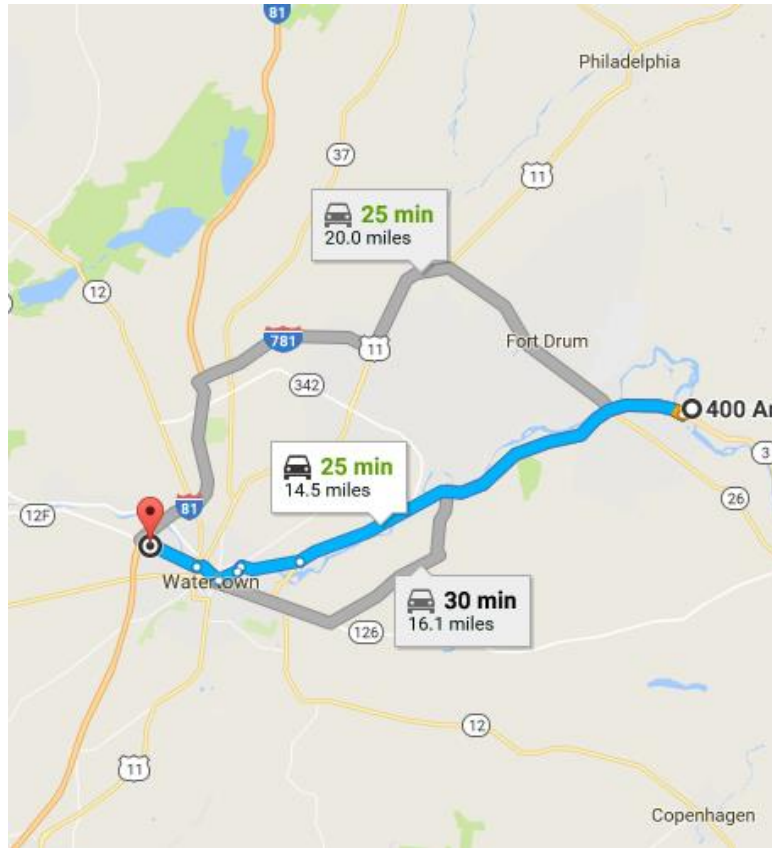
**START:** Deferiet Paper Mill Site, 400 Anderson Ave., Deferiet, NY 13628

Head west on Anderson Ave toward Post Office Dr	0.4 Mi
Slight left onto Wilna Ave	282 Ft
Turn left onto NY-3 E	5.9 Mi
Turn left onto State St	0.4 Mi
Turn right onto Thorpe St	361 Ft
Turn left onto West St	0.4 Mi
Destination on left	

**ARRIVE:** Carthage Area Hospital, 1001 West St, Carthage, NY 13619

## **8.9 WATERTOWN URGENT CARE CENTER**

The Watertown Urgent Care will be used for all Non-Emergency medical care necessary on the Deferiet Paper Mill Site. The facility is open seven days a week and the hours of operation are Monday - Friday: 8:00am to 7:30pm and Saturday - Sunday: 8:00am to 5:30pm. The Watertown Urgent Care facility is located at 457 Gaffney Drive, Watertown, NY 13601 and the contact number is: 315-779-2273.



**START:** Deferiet Paper Mill Site: 400 Anderson Avenue, Deferiet, NY 13628

Head west on Anderson Ave toward Post Office Dr	0.4 Mi
Slight left onto Wilna Ave	282 Ft
Turn right onto NY-3 W	14 Mi
Turn right onto Water St	1.4 Mi
Turn left onto Pearl St	0.2 Mi
Continue onto Factory St	0.5 Mi
Use the middle lane to turn slightly right onto Black River Pkwy	0.7 Mi
Turn right onto Coffeen St	1.2 Mi
Turn left onto Gaffney Dr	92 Ft
Destination on right	

**ARRIVE:** 457 Gaffney Drive, Watertown, NY 13601

I have been briefed on and understand this site safety plan. I have been informed of the personnel to contact if I have any questions and know where to report any additional health and safety hazards. I agree to work to the safety plan guidelines and understand that failure to do so could result in removal from the site and/ or termination.

[illegible]



